The OIL WEEKLY

10¢ A COPY

April 15, 1927 Volume 45. No. 4

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(DUNN TOOLAGRAM)

OIL WELL DUNN TOOLS

Where Safety is Vital the Dunn Super-Safety Elevator is Imperative—

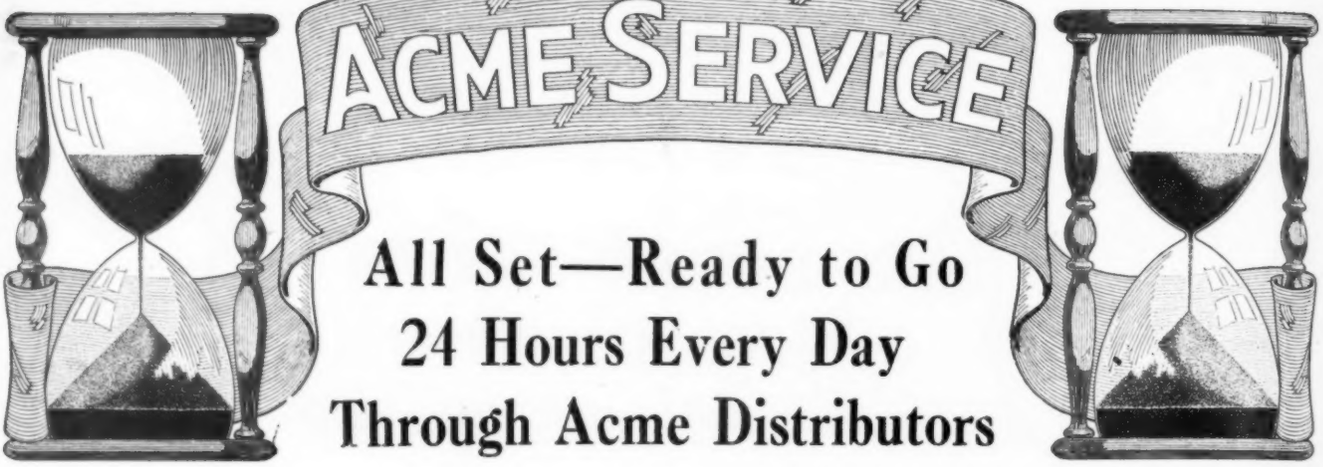
The Dunn Super-Safety Elevator (Automatic Link Releases, Side-Door Type) being used on the United North & South Oil Company's Kelly Well No. 1, in the Luling (Texas) field—The Deepest Well in the Mid-Continent—depth 6,610-feet, January 20th, 1927. They are headed for 8,000-feet and the Dunn Elevators are O. K. for that, and plenty more.

This automatic link release elevator is ideal for setting casing and handling rotary drill pipe. The use of two elevators, instead of one elevator and a set of slips, eliminates all possibility of "bottlenecking", crushing, crystallization and other damage to pipe that usually occurs when slips are used.

These "Super-Safety" Elevators are made in the regular Side-Door type, and also in our own distinctive Double-Door "Flyer" type, both standard and extra heavy weights.

DUNN
MANUFACTURING COMPANY
OXNARD, CALIFORNIA

Mid-Continent Branch Warehouse: 215 East Archer St. Tulsa, Oklahoma
Export Sales Office 150 Broadway, New York City



All Set—Ready to Go 24 Hours Every Day Through Acme Distributors

AT GRAHAM, TEXAS
Acme Rental Tool Service Co.
D. H. Bolin and C. E. Beavers are furnishing rental tool service
Specializing in Acme Fishing Tools

AT CROSS PLAINS, TEXAS
Acme Tool Company
Carries a complete stock of Acme Fishing Tools

AT ROXANA, TEXAS
Acme Fishing Tool Co. of Texas
C. E. Beavers gives prompt service with a complete line of Acme Fishing Tools

AT TULSA, OKLAHOMA
B. & A. Specialty Co.
Handle many leading oil field specialties and the leading Acme Drilling and Fishing Tools

AT OKMULGEE, OKLA.,
Acme Fishing Tool Co.
Our store here is always on the job selling and renting Acme Drilling and Fishing Tools

AT BILLINGS, MONTANA
Midland Iron Works
Both their warehouses and shops are well stocked with Acme Drilling and Fishing Tools

AT KEVIN, MONTANA,
Great Northern Tool & Supply Co.
Specialize in oil well repair work, oil field supplies, equipment and Acme Drilling and Fishing Tools

Acme Distributors are chosen for their ability to maintain field service equal to Acme requirements. Acme service has been the recognized Standard of Oil Country Service for more than a quarter of a century.

Acme Distributors are young men—keen, energetic and anxious to render prompt, intelligent, courteous service. They are conveniently located, properly financed and experienced in handling drilling and fishing tools and oil field supplies.

Acme Distributors are glad to handle Acme Drilling Tools and Acme Fishing Tools. These tools have been developed over a period of twenty-five years by practical Drillers and experienced Fishermen. They are built in a plant equipped with improved, accurate machinery. The material used in building each tool has been proven the best for that tool. Acme Quality is built into every part of each Acme Drilling Tool and Fishing Tool.

Acme Distributors know that Acme Tools are built to give long, satisfactory use. Modern manufacturing plant and large volume of business permits giving prices that are real values, not always the smallest first cost but always the Highest Quality. Each Acme Fishing Tool Rental Charge is fair. It is based on the life of the Fishing Tool it applies to, as shown by our experience records. Acme Service, Quality and Values are attested by Satisfied Customers.

Acme distributors are always back of Acme Tools wi h all their resources. And all our resources are back of our distributors.

You can't go wrong on ACME

AT WAYNESBURG, PENNA.,
Elms Brothers and Company
Specialize in general repair and machine shop work and Acme Drilling and Fishing Tools

AT LOGAN, OHIO,
Logan Foundry & Machine Co.
At this general foundry and machine works they have a complete stock for sale or rent of Acme Drilling and Fishing Tools

AT ALBANY, TEXAS
Acme Tool Company
Specializes in fishing tools with complete stock of Acme Drilling and Fishing Tools

AT WHITTENBURG, TEXAS
Acme Fishing Tool Co. of Texas
Is ready to serve you with a complete stock of Acme Drilling and Fishing Tools

AT McCAMEY, TEXAS
Acme Tool Company
Has competent men who are anxious to serve you with Acme Drilling and Fishing Tools

AT BROWNWOOD, TEXAS
Acme Tool Company
Has anticipated your wants with a complete stock of Acme Drilling and Fishing Tools

AT BRADFORD, PENNA.
Lloyd, Smith Company
Handle a general line of oil field supplies and Acme Drilling and Fishing Tools

AT KEMMERER, WYOMING,
The Great Northern Tool & Supply Co.
Conduct a general forge and machine shop, together with complete stocks of oil well supplies and Acme Drilling and Fishing Tools

All Stores are Stocked with B & R Wire Line Drilling Clamps

ACME FISHING TOOL CO.

Parkersburg, West Virginia.

Export Office: 136 Liberty St., New York City, N. Y.

The OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 1716 Dallas Ave., Houston, Texas. Subscription price $1.00 per year; 10 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879.

SANDU... APR 20 1927 REF'D TO

Carefree Operation

AFTER ALL, the demands that you make of your pumps are very simple. All that you ask is that in addition to doing their work properly, they operate year in and year out with a *minimum of care.*

In explaining how well GASOS meet this requirement, we need only make two statements—

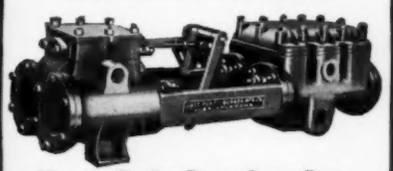
(1) GASO sales, without the aid of a high-pressure selling organization, have assumed world-wide proportions.

(2) Still another addition is being built to our plant.

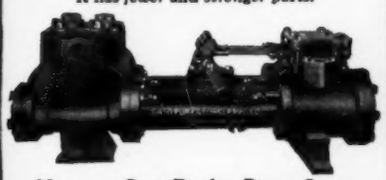
Our catalog is a 64-page book of pump information. May we send you your copy?

STEAM-DRIVEN PUMPS

Correct in Design—
Long Lived—Dependable



No. 401—Duplex Piston Steam Pump (175 to 800 pounds pressure). A general service model, widely used in the handling of heavy oils. Like all Gaso models, it has *fewer* and *stronger* parts.



No 404—Gaso Duplex Piston Steam Pump for 500 to 800 pounds service. A high pressure pump, ideally suited for handling gasoline, acids, etc., under high pressure. Practically no gasket surface; *fewer* and *stronger* parts.

No. 407—Its ability to handle large capacities under high pressures has made this pump (600 to 800 pound) one of the most widely used of the Gaso line. Heavily constructed to withstand abuse. *Fewer* and *stronger* parts.

GASO PUMP & BURNER MFG. CO.
Tulsa · Oklahoma

GASO PUMPS
for every oil-industry need

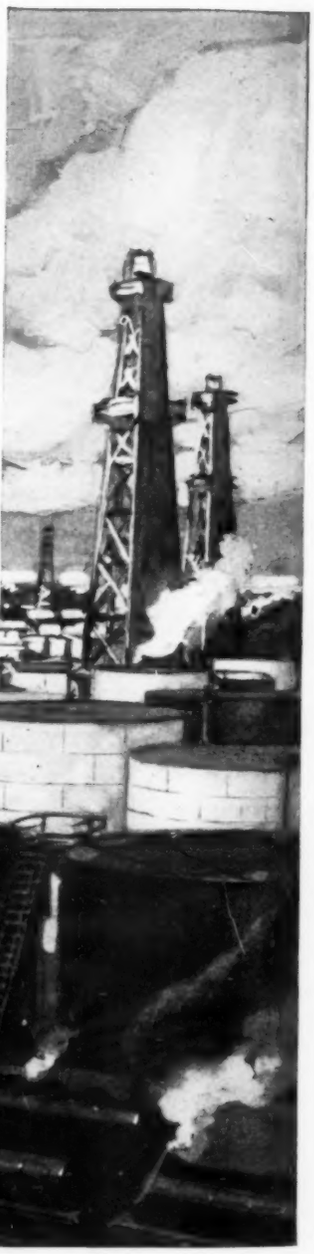
By Protecting the Surface You Protect all

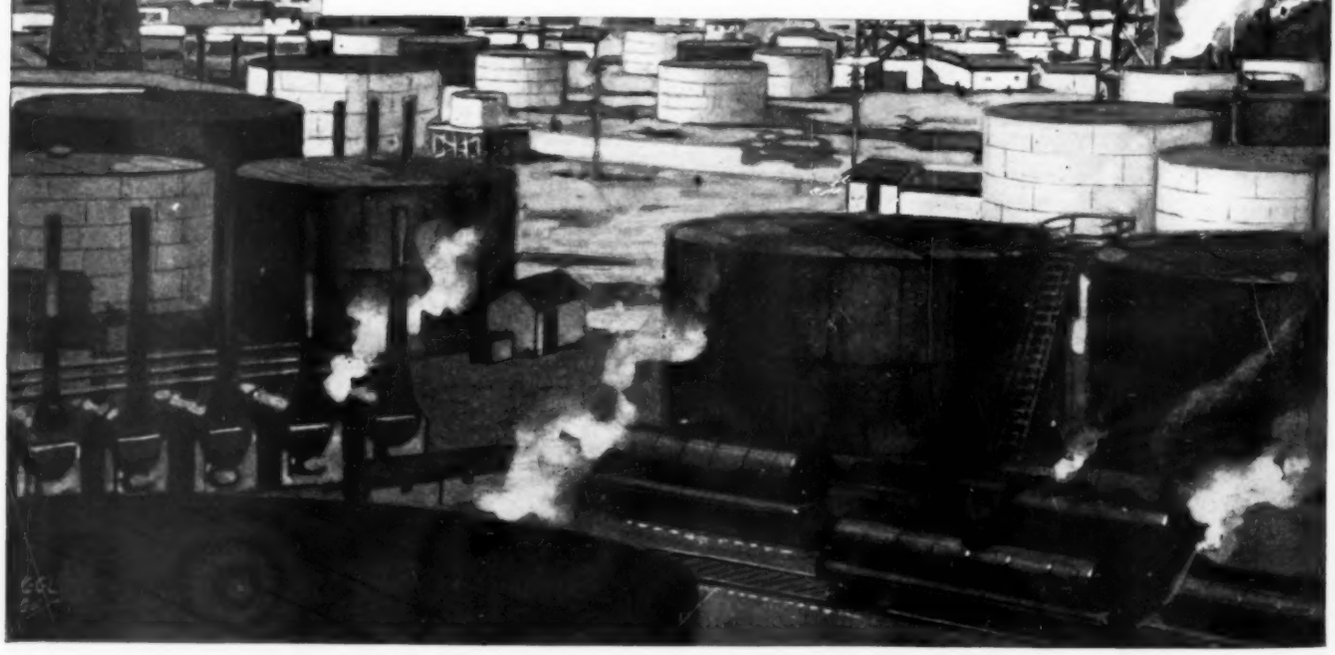
Millions upon millions . . . that's what rust is costing the oil and gas industries in real dollars each year. How much of this is your loss? Think it over . . . and remember that this loss can be prevented. Rust can be conquered permanently by spreading Arco protection over your equipment.

For 46 years the Arco Company has paid particular attention to the formulation of paints and protective products.

The benefits of this experience are yours for the asking. Tell us your problems. We'll be glad to make recommendations. *May we hear from you soon?*

THE ARCO COMPANY, CLEVELAND, OHIO
Paints • Varnishes • Enamels • Lacquers (78)



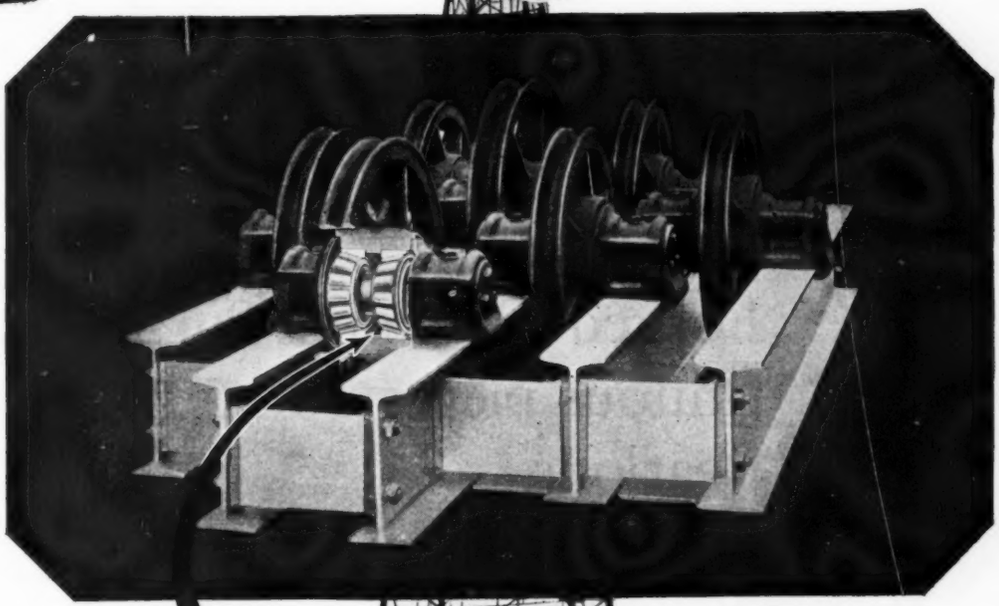


ARCO

PAINTS VARNISHES ENAMELS LACQUERS

Say you saw it in The OIL WEEKLY

Announcing

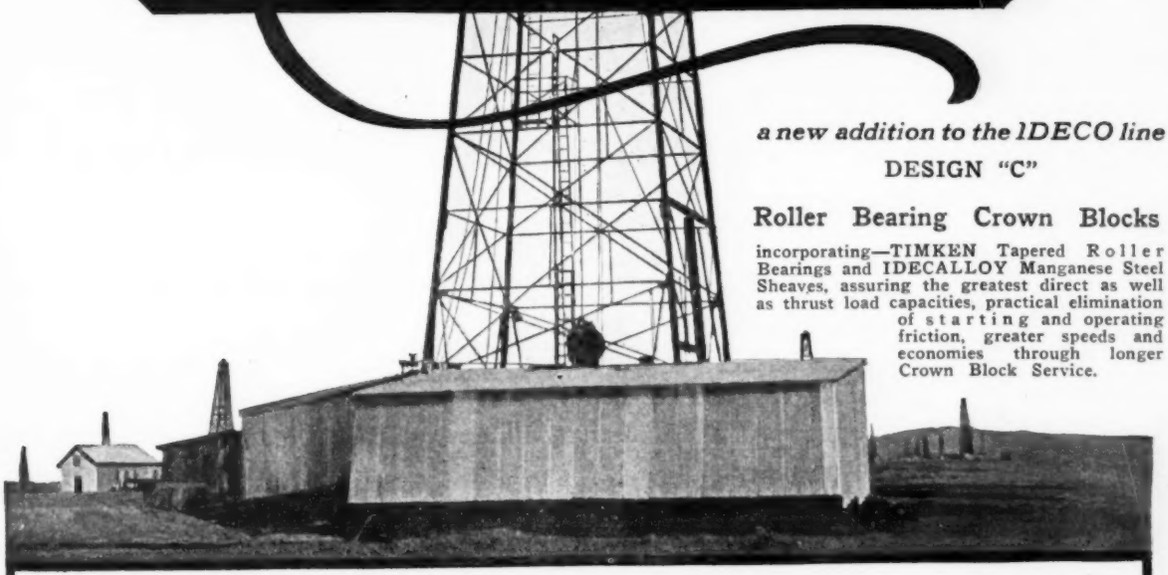


a new addition to the IDECO line

DESIGN "C"

Roller Bearing Crown Blocks

incorporating—TIMKEN Tapered Roller Bearings and IDECALLOY Manganese Steel Sheaves, assuring the greatest direct as well as thrust load capacities, practical elimination of starting and operating friction, greater speeds and economies through longer Crown Block Service.



INTERNATIONAL STEEL IDECO DERRICKS
(GALVANIZED)

THE INTERNATIONAL DERRICK & EQUIPMENT CO.

Dallas	Corsicana
Houston	Pampa
Mexia	Panhandle
Wichita Falls	Shreveport
Amarillo	Oil City
Borger	Smackover

The largest company devoted exclusively to the manufacture of steel (galvanized) equipment for the oil, gas and artesian industries.

COLUMBUS, OHIO **TORRANCE, CAL.**

California Representative

National Supply Co. of California

Eldorado	Wewoka
Tulsa	Denver
Tonkawa	Casper
Drumright	Torrance
Okemah	Los Angeles
Seminole	Taft

Export Representation: 30 Church Street, New York City, Columbus, Ohio, Los Angeles and San Francisco, California

A NEW JON

not only *NEW* b u

Forged Box and Pin in one continuous piece. Joints to API specifications.

A NEW STEEL

highly resistant to fatigue –

After three years of continuous tests we firmly believe this is the best Sucker Rod yet produced.

It's so good we believe many users of Double Pin Sucker Rods—after a trial will feel that they will do well to—"*do away with one-half the joints in a string.*"

NOT A NEW EXPERIMENT

by inexperienced Sucker Rod manufacturers, but a New Rod made by the world's oldest Steel Sucker Rod Company.

THE S. M. JON E

TOLEDO, OHIO ~ 602 WR IGI

Say you saw it in The OIL WEEKLY

NES ROD

but DIFFERENT!

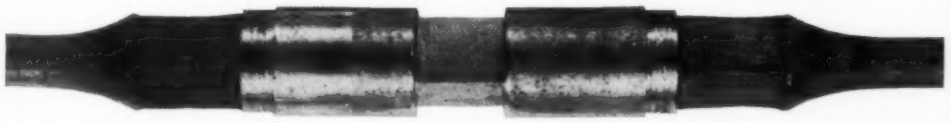
TABLE OF SPECIFICATIONS

Size Rod	5/8"	3/4"	7/8"
Pin	15/16"	1-1/16"	1- 3/16"
Collar	1-3/8"	1-1/2"	1-11/16"
Square	15/16"	1"	1- 1/16"

ORDINARY STEEL	THIS SPECIAL SUCKER ROD STEEL
Elastic Limit, 50,000 lbs. per sq. in.	71,000 lbs.
Tensile Strength, 100,000 lbs. per sq. in.	114,000 lbs.
Elongation, 25%	56%
Red. in Area, 45%	56%
FATIGUE VALUES, 20,000	**50,000**

NOTE—An increase of **42%** in elastic limit, but a **150%** increase in Fatigue Resistance.

If your dealer can't supply you, write us — or get in touch with any of our field men



ALSO MADE IN OUR FAMOUS GIANT DOUBLE PIN—
WITH THE STRONGEST COUPLING

NES COMPANY

IGHT BLDG., TULSA, OKLA.

Say you saw it in The OIL WEEKLY

"Good Enough" Methods are not Tolerated by Chester.

Throughout each day Chester regularly checks the taper and pitch of threads from each threading machine.

The usual method of determining taper by calipers for the short space of 2½ or 3 inches of thread may be good enough for some tube makers, but Chester found this method open to inaccuracies, and promptly abandoned it. The long, carefully-machined straight edges clamped to the threads is the most accurate method known for determining the taper, which can be read to the hundreth part of an inch.

Chester also checks accuracy of threads per inch (that is to say "pitch") with a delicate instrument which registers on its clock-like dial, variations of one thousandths of an inch.

SUPER-ACCURACY

Chester recognizes that accuracy of pitch and taper is the foundation for the satisfactory making-up of threaded joints, and no length is allowed to go into the field which does not conform strictly to Chester's rigid specifications and inspections.

South Chester Tube Company

CHESTER, PENNA.

Pittsburgh New York Houston Tulsa Los Angeles

Casing, Tubing, Line Pipe, Drive Pipe, Rotary Drill Pipe

District Sales Managers:

W. E. Gibson, 801 Columbia Bank Bldg., Pittsburgh, Pa.

P. N. Guthrie, Jr. 30 Church St., New York City

J. P. Cooney 909 A. G. Bartlett Bldg., Los Angeles, Calif.

E. H. Bosches 2024 Houston Post-Dispatch Bldg., Houston, Texas

Distributors:

Prichard Supply Co. Mannington, W. Va.

Petroleum Supply Co. Houston, Texas, Norphlet, Ark.

Wagner Supply Co. Fort Worth, Cross Plains, Panhandle, Breckenridge, Best, Amarillo and Borger, Texas

United Oil Well Supply Co. 908 A. G. Bartlett Bldg., Los Angeles, Calif.

Midland Iron Works Billings, and Kevin, Mont.

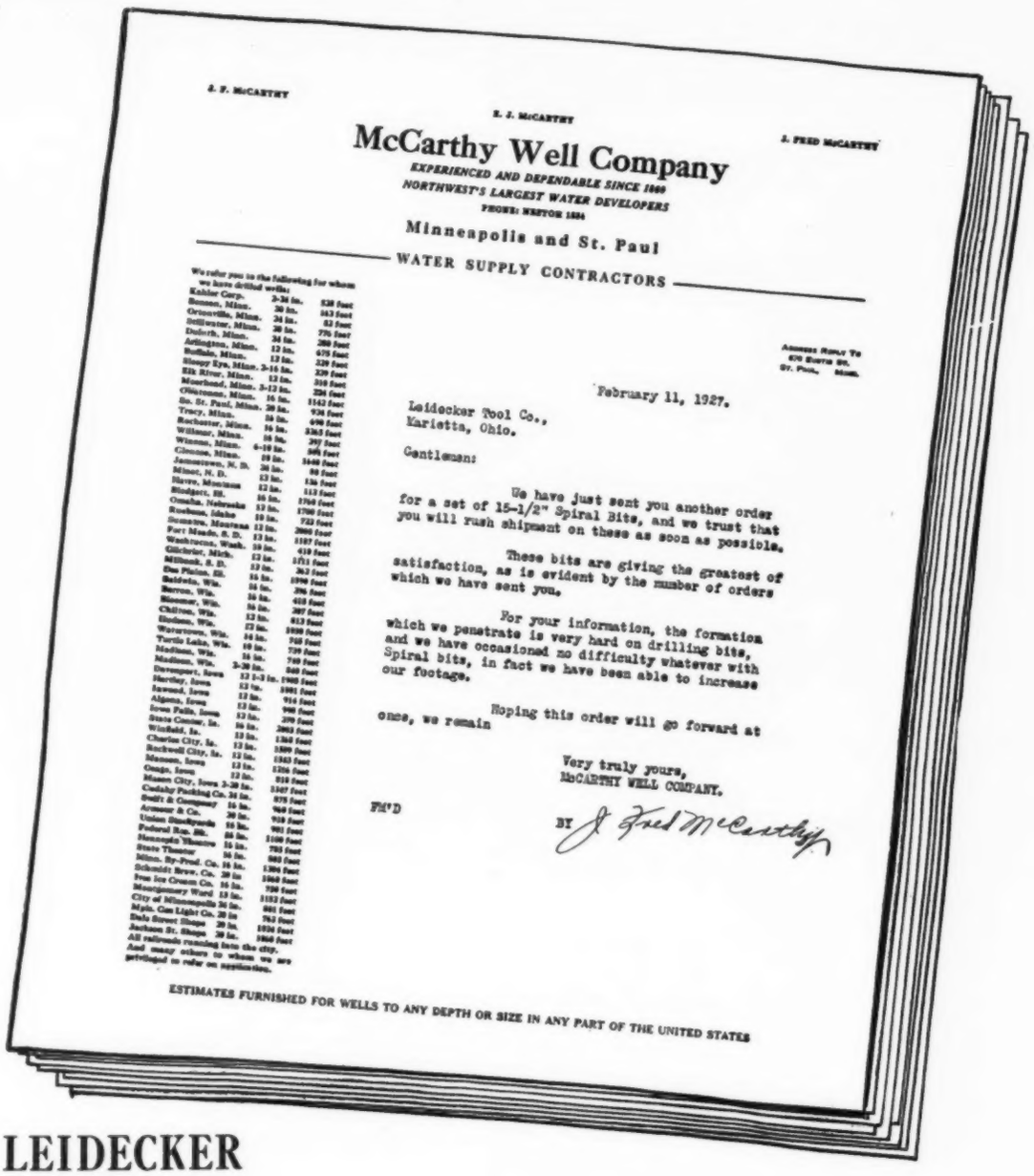
Hillman-Cooney, Inc. 1118 Santa Fe Ave., Los Angeles, Calif.

Warehouses at: Houston, Texas—Thenard, Cal.

CHESTER

STEEL SPECIALISTS IN CASING FOR DEEP WELL DRILLING CASING

Say you saw it in The OIL WEEKLY



E. J. McCARTHY

McCarthy Well Company

J. FRED McCARTHY

EXPERIENCED AND DEPENDABLE SINCE 1869
NORTHWEST'S LARGEST WATER DEVELOPERS
PHONE: NESTOR 1884

Minneapolis and St. Paul

WATER SUPPLY CONTRACTORS

We refer you to the following for whom we have drilled wells:

Kahler Corp.		
Rosseau, Minn.	3-36 in.	138 feet
Owatonna, Minn.	30 in.	163 feet
Stillwater, Minn.	24 in.	52 feet
Duluth, Minn.	36 in.	775 feet
Arlington, Minn.	24 in.	288 feet
Redlake, Minn.	12 in.	675 feet
Sleepy Eye, Minn.	3-16 in.	329 feet
Elk River, Minn.	12 in.	339 feet
Moorhead, Minn.	3-12 in.	316 feet
Chisholm, Minn.	16 in.	256 feet
So. St. Paul, Minn.	20 in.	1142 feet
Tracy, Minn.	24 in.	936 feet
Rochester, Minn.	16 in.	690 feet
Willmar, Minn.	16 in.	1367 feet
Winona, Minn.	6-10 in.	397 feet
Glencoe, Minn.	10 in.	385 feet
Jamestown, N. D.	26 in.	1440 feet
Minot, N. D.	24 in.	80 feet
Havre, Montana	13 in.	136 feet
Blodgett, Ill.	12 in.	113 feet
Omaha, Nebraska	16 in.	1765 feet
Rexburg, Idaho	13 in.	1700 feet
Sumatra, Montana	10 in.	723 feet
Fort Meade, S. D.	12 in.	2665 feet
Waukomis, Wash.	13 in.	1187 feet
Gilchrist, Mich.	10 in.	418 feet
Milbank, S. D.	12 in.	1751 feet
Des Plaines, Ill.	12 in.	363 feet
Baldwin, Wis.	16 in.	1890 feet
Barron, Wis.	16 in.	396 feet
Bloomer, Wis.	16 in.	418 feet
Chilton, Wis.	16 in.	387 feet
Hudson, Wis.	12 in.	813 feet
Watertown, Wis.	12 in.	1000 feet
Turtle Lake, Wis.	14 in.	745 feet
Madison, Wis.	10 in.	739 feet
Madison, Wis.	16 in.	745 feet
Davenport, Iowa	3-30 in.	840 feet
Hartley, Iowa	12 1-2 in.	1765 feet
Inwood, Iowa	12 in.	1001 feet
Algona, Iowa	12 in.	714 feet
Iowa Falls, Iowa	12 in.	996 feet
State Center, Ia.	12 in.	370 feet
Winthrop, Ia.	10 in.	2003 feet
Charles City, Ia.	12 in.	1368 feet
Rockwell City, Ia.	12 in.	1500 feet
Manson, Iowa	12 in.	1343 feet
Osage, Iowa	12 in.	1334 feet
Mason City, Iowa	3-30 in.	910 feet
Cudahy Packing Co.	30 in.	1147 feet
Swift & Company	24 in.	975 feet
Armour & Co.	30 in.	968 feet
Union Stockyards	30 in.	918 feet
Federal Rub. Mfg.	24 in.	901 feet
Minneapolis Thresher	24 in.	1100 feet
State Theatre	16 in.	720 feet
Minn. By-Prod. Co.	16 in.	883 feet
Schmidt Brew. Co.	20 in.	1304 feet
Fox Ice Cream Co.	16 in.	1060 feet
Montgomery Ward	13 in.	730 feet
City of Minneapolis	36 in.	1122 feet
Mpls. Gas Light Co.	20 in.	801 feet
Bath Street Shops	20 in.	763 feet
Jackson St. Shops	30 in.	1050 feet
All railroads running into the city.		1800 feet
And many others to whom we are privileged to refer on application.		

ESTIMATES FURNISHED FOR WELLS TO ANY DEPTH OR SIZE IN ANY PART OF THE UNITED STATES

E. J. McCARTHY

J. FRED McCARTHY

Address Reply To
470 Sixth St.
St. Paul, Minn.

February 11, 1927.

Leidecker Tool Co.,
Marietta, Ohio.

Gentlemen:

We have just sent you another order for a set of 15-1/2" Spiral Bits, and we trust that you will rush shipment on these as soon as possible.

These bits are giving the greatest of satisfaction, as is evident by the number of orders which we have sent you.

For your information, the formation which we penetrate is very hard on drilling bits, and we have occasioned no difficulty whatever with Spiral bits, in fact we have been able to increase our footage.

Hoping this order will go forward at once, we remain

Very truly yours,
McCARTHY WELL COMPANY.

BY J. Fred McCarthy

FM'D

LEIDECKER SPIRAL DRILLING BIT

Patented
Other Patents Pending

For Hard Formations

"A fine wet hole Bit", "an unequalled mud-mixer" but Spiral Bits are equally effective in hard formations as this letter confirms.

The satisfaction expressed by repeat orders is even more impressive.

"Drilling Tools Designed Right Will Drill More."

Mid-Continent Distributors

The Bovaird Supply Company

Stocks at Tulsa, Sapulpa, Beggs, Bristow and Seminole, Oklahoma, Independence, Kansas, and Borger, Texas

Sold by all Supply Houses

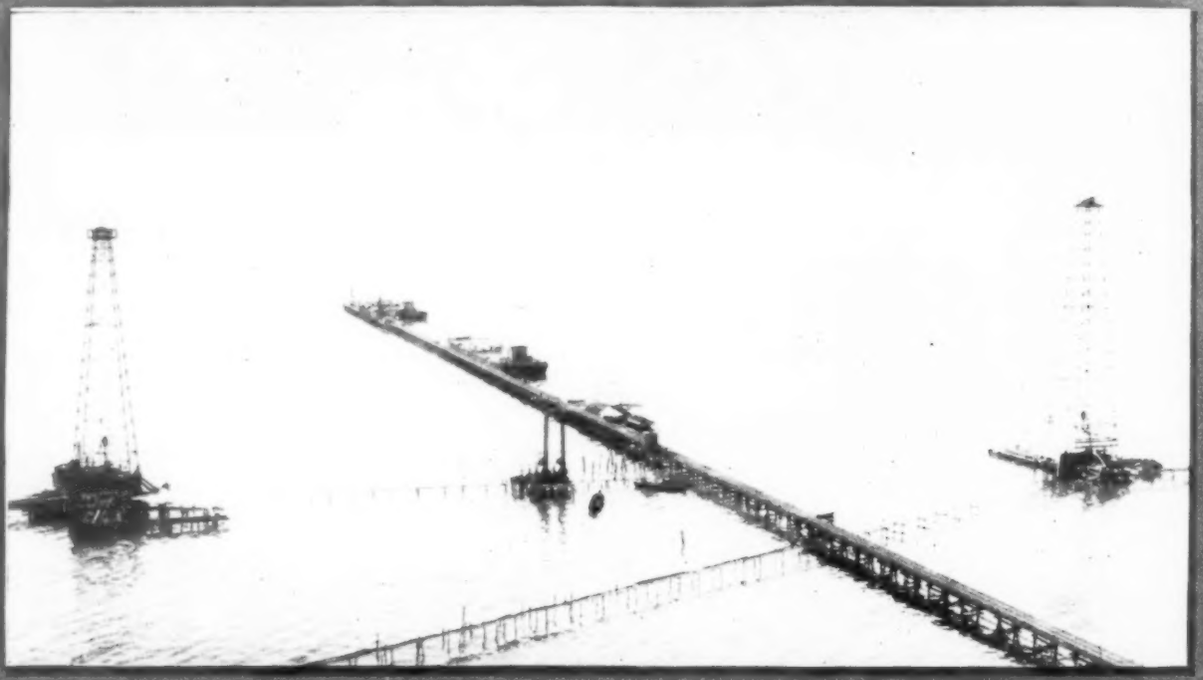
Manufactured by

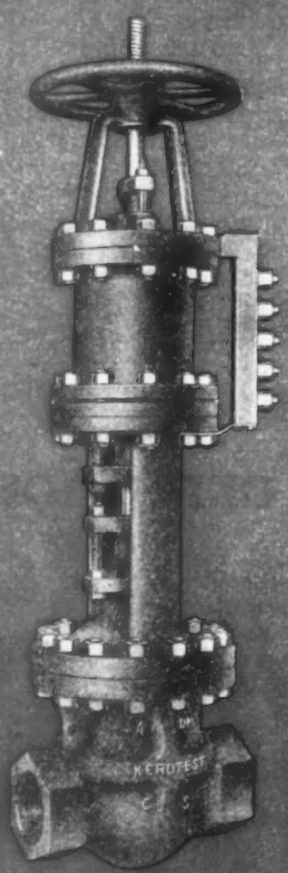
The Leidecker Tool Co.

Marietta, Ohio

Branches: Casper, Wyoming, Bartlesville, Okla., Basin, Wyoming

Export Office—90 West St., New York





A New KEROTEST Registered U.S.Pat.Of.

AUTOMATIC VALVE

(PATENTS PENDING)

That Conquers FIRE As Well As Pressure!

For many years past the super-strength of Kerotest Valves has conquered the fury of many of the World's wildest oil wells—now comes the NEW KEROTEST Automatic Shutoff Valve that conquers fire—the oil producers' most destructive hazard.

As the name indicates, this unique KEROTEST Valve automatically shuts off flowing wells in case of fire by means of an easily melted metal link, which releases the air pressure from the storage cylinder and drives the valve wedge gate to a perfect seat—automatically cutting off further flow of oil or gas.

Simple, compact and easy to install, the Kerotest Automatic Shutoff Valve represents the most outstanding advance in valve design in a century.

A descriptive circular covering this new Kerotest development will be mailed on request.

Kerotest Manufacturing Company

Pittsburgh, Penna.

CARRIED IN STOCK AND SOLD BY

GRINNELL COMPANY OF THE PACIFIC
Los Angeles San Francisco

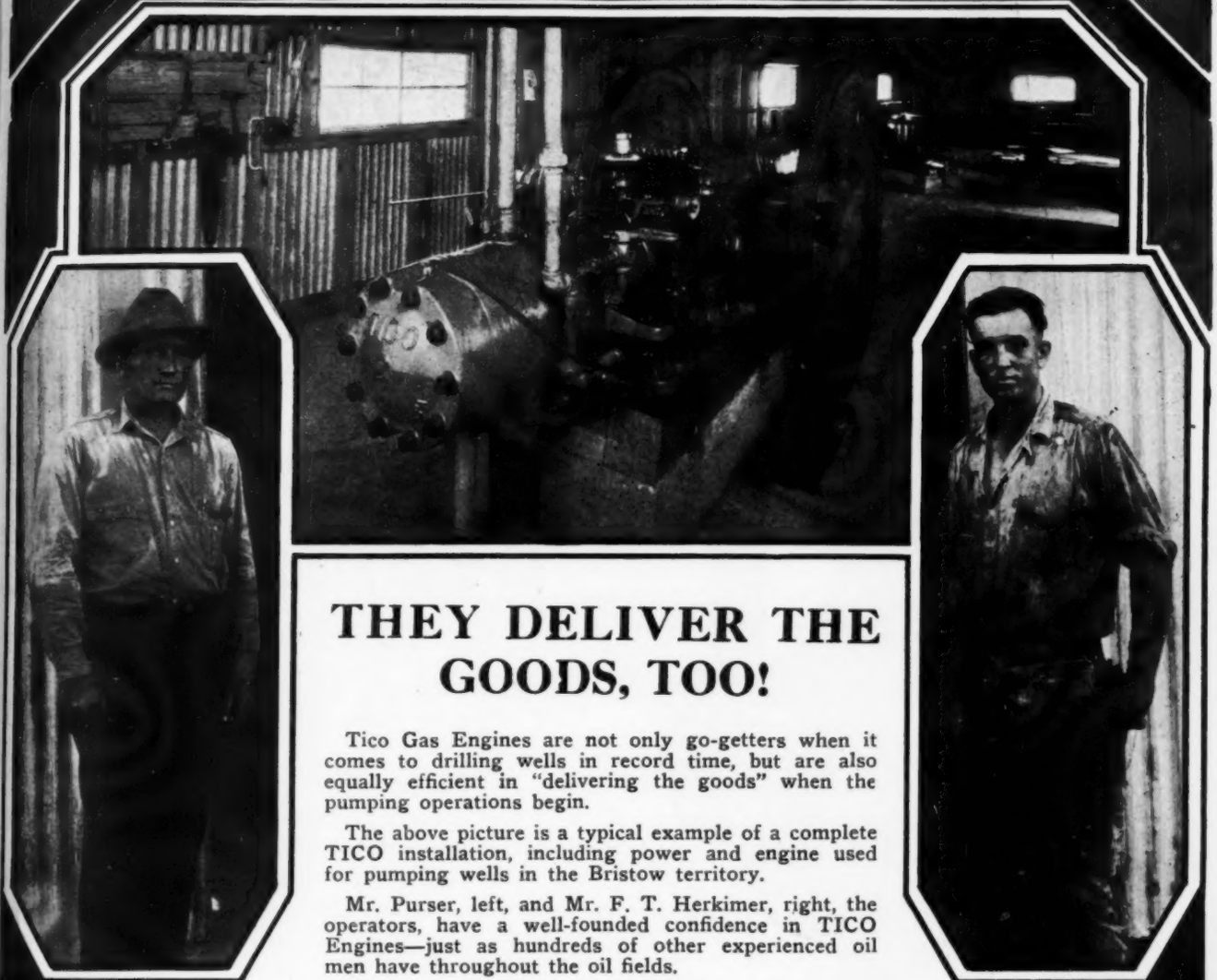
OIL WELL SUPPLY COMPANY
Oklahoma Kansas Colorado Wyoming

NORVELL-WILDER HARDWARE CO.
Houston Beaumont Shreveport Fort Worth

Export Distributors:
OIL WELL SUPPLY COMPANY
Pittsburgh New York Tampico London

AP

TICO GAS ENGINES



THEY DELIVER THE GOODS, TOO!

Tico Gas Engines are not only go-getters when it comes to drilling wells in record time, but are also equally efficient in "delivering the goods" when the pumping operations begin.

The above picture is a typical example of a complete TICO installation, including power and engine used for pumping wells in the Bristow territory.

Mr. Purser, left, and Mr. F. T. Herkimer, right, the operators, have a well-founded confidence in TICO Engines—just as hundreds of other experienced oil men have throughout the oil fields.

You will find it time well invested to check up on the advantages of the TICO Engine and TICO Band Wheel Power when you are next in the market. Any Continental man will be glad to show you why.

The TITUSVILLE IRON WORKS Co.

TITUSVILLE ~ PENNA.

Titusville
Acme Boilers
Single and Twin
Steam Drilling Engines
Tico Gas Engines
Band Wheel and
Geared Powers

SOLE DISTRIBUTORS

The CONTINENTAL SUPPLY COMPANY

For
THE CONTINENTAL
No. 2 RECTOR STREET

Export
WELL SUPPLY CO.,
NEW YORK CITY, N. Y.

Titusville
Acme Rotaries
Acme Swivels
and Speed Draw Works
High Pressure Boilers
Crown Blocks
Slush Pumps

RUGGED ~ ENDURING

4-point suspension (Universal joint principle)

The proven bearing in the new Regan Swivel

Years of testing have proved that the flat type roller bearing is most suitable for carrying excessive thrust loads at slow speed. Adoption of the straight sectional roller type bearing with reversible plate in the Regan Rotary Swivel is the result of exhaustive tests of every conceivable type of bearing. In this advanced type of Swivel 4-point suspension allows equal distribution of the load to all points of the bearing at all times, eliminating destruction from strains imposed by forces outside of the Swivel.

Regan

Forge & Engineering Co.

Manufacturers of Oil Well Equipment

Quality Brought to the Front Through Years of Experience

San Pedro, California U.S.A.

Houston, 1521 Post Dispatch Bldg.

New York City 75 West St., Wm. Braat, Mgr.

Oklahoma City, 331 W. Main St.

Maracaibo, Venezuela Wm. Adams, Care American Consul

SPECIFY SPANG BECAUSE

Weldless Drilling Jars

1 They are forged from a solid billet of alloy steel.

2 They are specially heat treated after forging, giving the steel texture a close grained toughness that means super-strength and service.

3 They are used and recommended all over the world.

4 More than 300 supply stores have Spang Weldless Jars for immediate delivery.

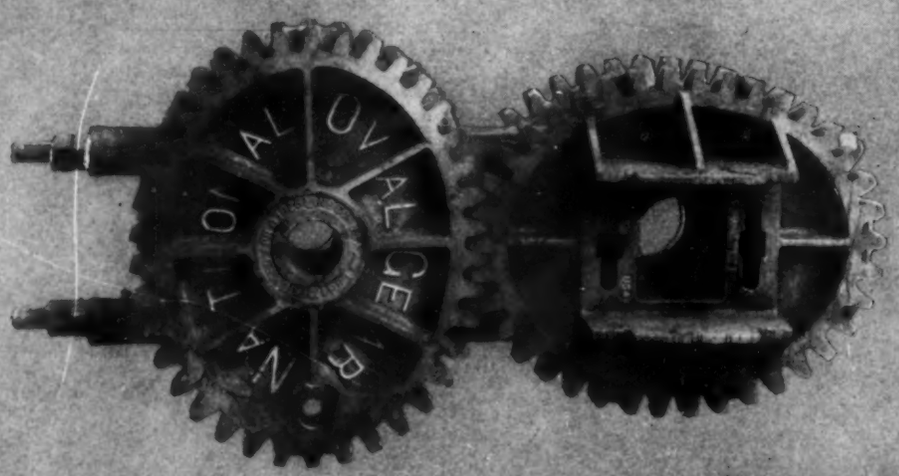
Patented Oct. 6, 1925—other patents pending

SPANG & COMPANY
BUTLER, PENNA.

Sold by All Leading Supply Houses

Patented Oct. 6, 1925—Other Patents Pending

NATIONAL OVAL GEAR PUMPING ATTACHMENT



THE NATIONAL SUPPLY COMPANIES

Say you saw it in The OIL WEEKLY

the factor of certainty

THERE are all of six things about a Reed Rock Bit which matter mightily, alike to the men on the job and the fellows behind the glass doors marked "Executive Offices—Private". These six:

- **Great Cutting Speed**
- **Utmost Rugged Strength**
- **Perfect Balance and Direction**
- **Ease for any handling**
- **Handiness when changing cutters**
- **Day-by-day economy of operation**

For any one of the six, alone by itself, a rock cutting tool might be mighty well worth buying.

But when all six are bought with one tool the buyer gets a factor of certainty which counts tremendously in the field. And the more remote the field, the more such certainty does count.

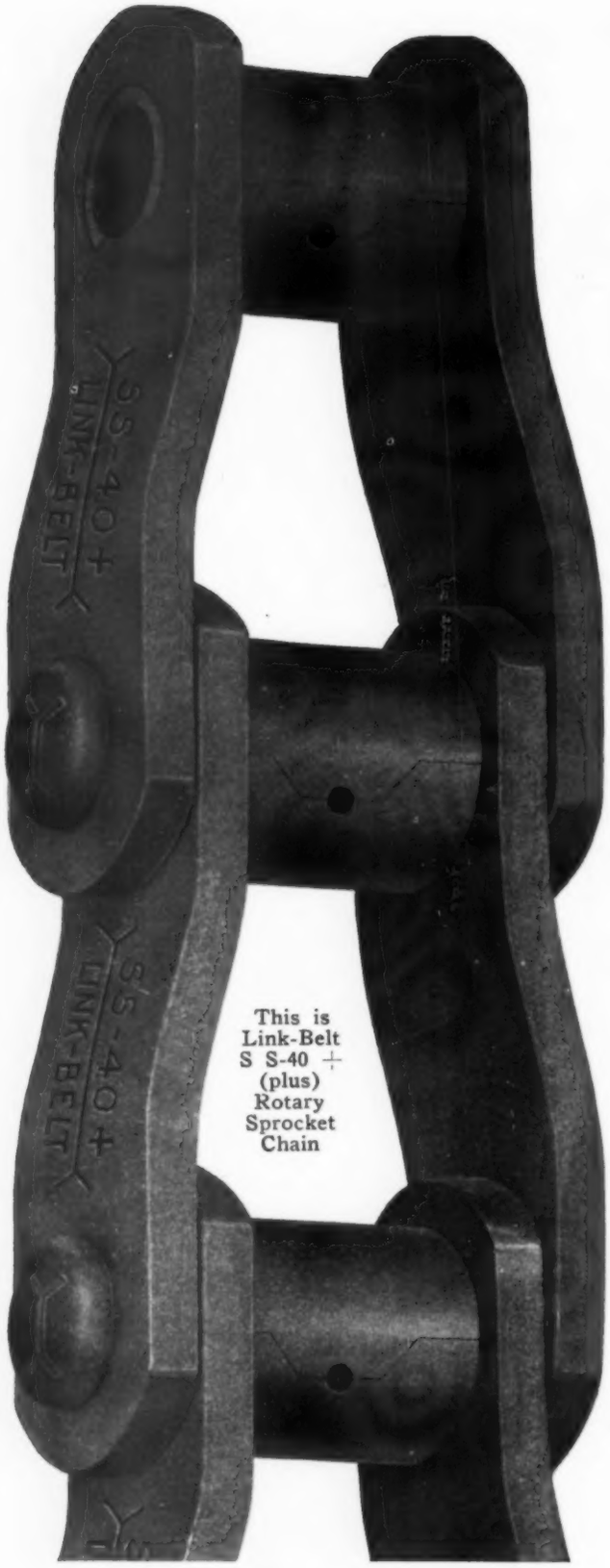
If it seems to you worth finding out about exactly, you can expect us to go to any lengths to help you find out.

REED ROTARY DRILLING TOOLS

Reed Roller Bit Co.
Houston Los Angeles

Reed **ROCK BIT**

Your letter demanding some proof of our downright assertions will get the kind of an answer you want. And proofs along with it.



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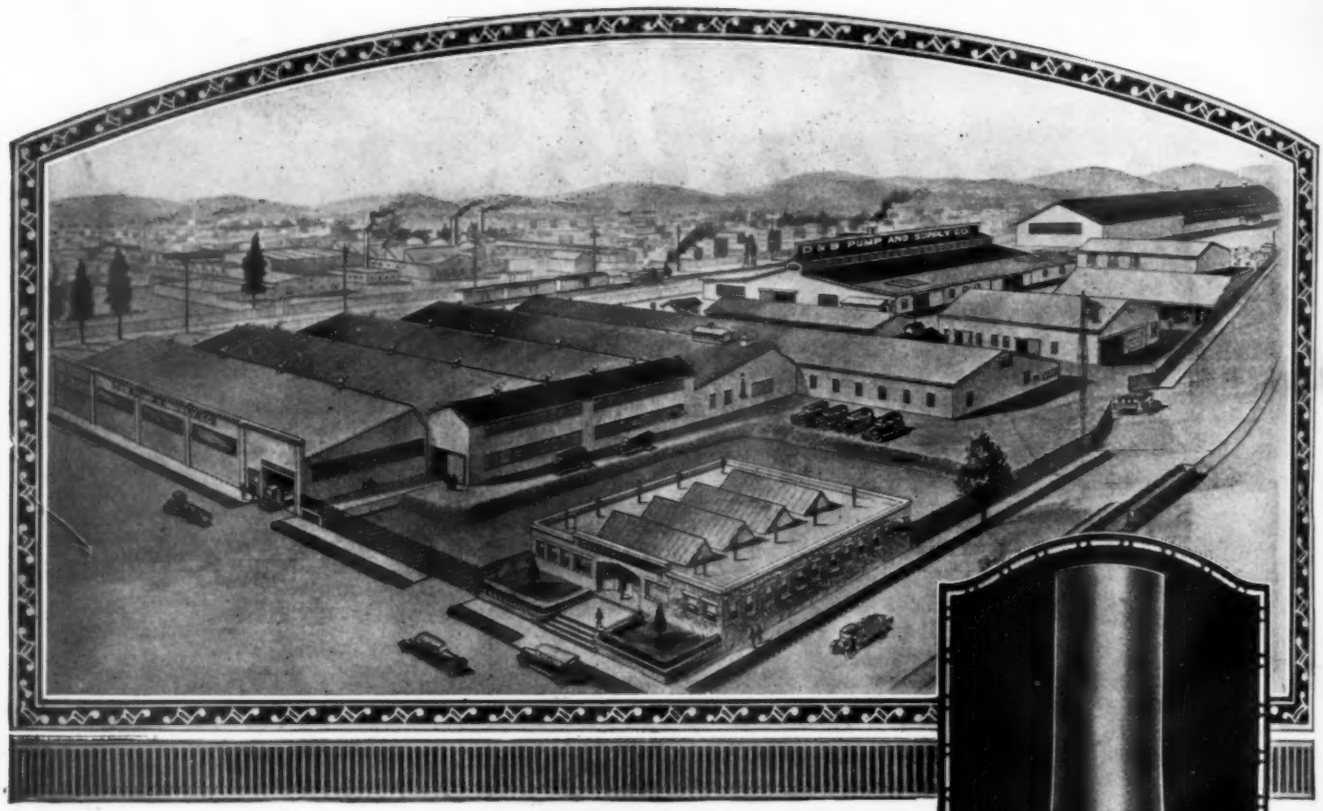

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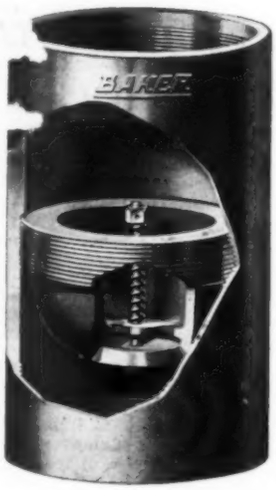

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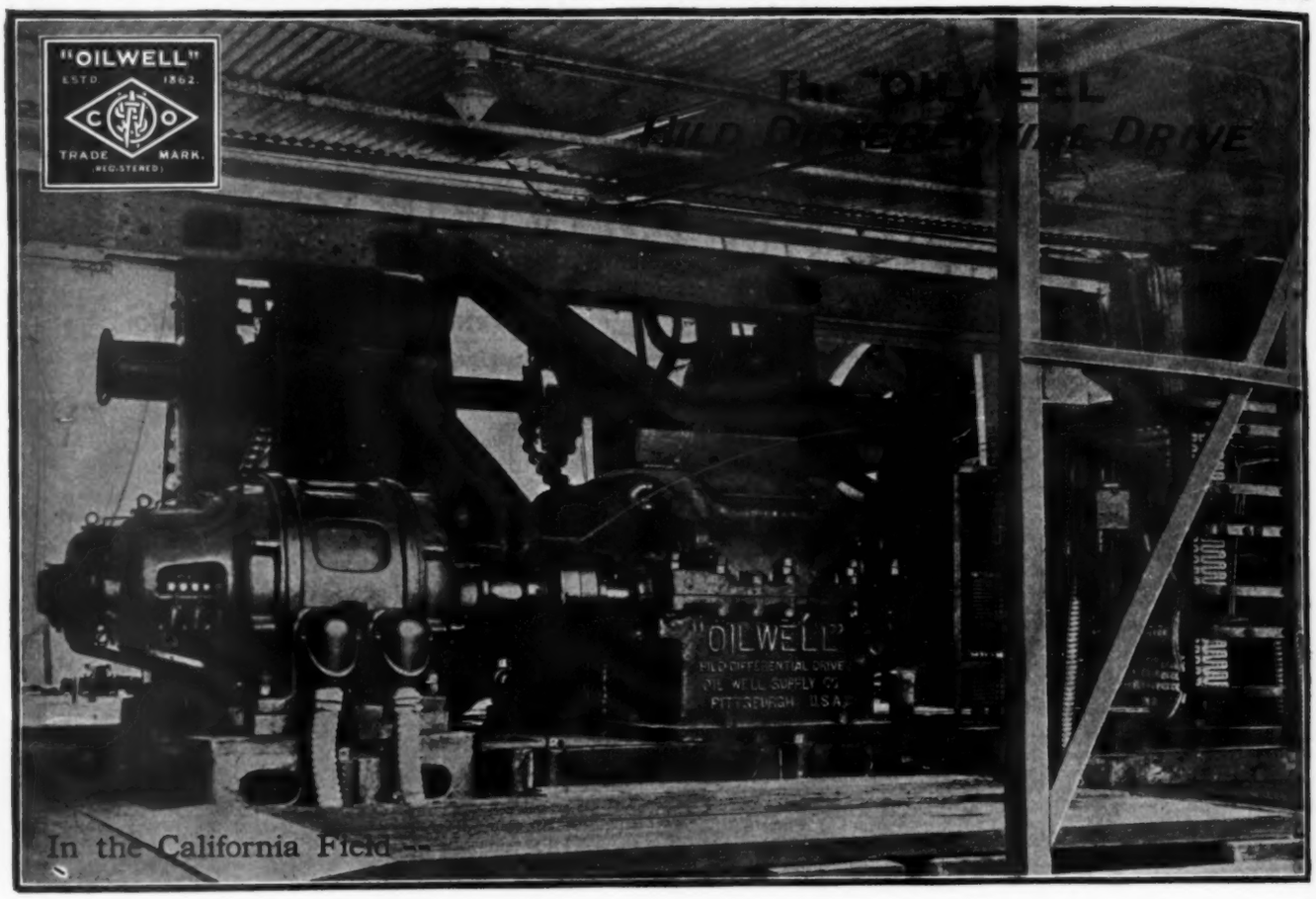

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Magnolia's Bid for Further Cut Gets No Support

Failure of other major purchasers to meet fourth Mid-Continent reduction accepted as marking low point; gasoline movement slow

By KENT RIDLEY

HESITANCY on the part of other major buyers in meeting the new low schedule of crude prices in the Mid-Continent, has encouraged the idea among some producers that the bottom has been reached. Others are more pessimistically of the opinion that the lower schedule eventually is to be adopted, while still others hold that the delay will mean that when another company disturbs the price schedule again it will be for a still more drastic cut.

Much surprise followed announcement of the Magnolia Petroleum Company on April 7 that effective that date a lower price and a two-cent differential was inaugurated on all oil purchased by that concern on a garvity basis in the Mid-Continent area. The surprise was not at the cut, for it was anticipated in many quarters, but the wonder was that the other companies did not immediately follow suit. As the usual follow-up was not in evidence by the end of the week, producers in the lower end of the Mid-Continent adopted the idea that the bottom price has been reached and increased their tendency toward storing oil for the rebound. This will have its effect in immediately raising the premiums required of independent refiners securing their oil in the open market. The lower prices could not have an effect upon drilling operations, as already this work has been restricted to fulfilling lease requirements and protecting lines.

Rumor nominated the Humble Oil & Refining Company to be first to follow with the lower posting, but as this is written (Wednesday) such action has not been taken, and it begins to appear that Magnolia has taken the pitcher to the well the proverbial once too often, and some others who possibly have heavier stocks than Magnolia's do not want to reduce their inventories any further. Empty tanks are much in demand and several trades involving big space have been announced.

Slow gasoline buying has forced further recession of a quarter-cent for the domestic grade. Apparently the jobbers have withdrawn to await lower prices after buying their requirements for April a couple of weeks ago. Export buyers are also still not taking their normal quotas for this season, and fuel oil has dropped. The refiners' margins are now the lowest since the adjustment of prices downward began several weeks ago.

Less change was shown in the status of United States daily average production during the week ending April 9 as compared with the previous week than any other week within the past six months. American Petroleum Institute estimates give the total daily recovery from all fields as 2,478,300 barrels, which represents an increase of 400 barrels over the week ending April 2.

The greatest production fluctuation was in the Rocky Mountain States with a drop of 5,200 barrels, the greatest part of which was lost from Salt Creek field. This drop was considerably offset by a 3,900 barrel increase from California, an outgrowth of Seal Beach flush. A 1,500 barrel gain in the Eastern States was checked by the same amount of drop from Arkansas fields.

With only a gain of 800 barrels in greater Seminole for the weekly average Oklahoma increased but 450 barrels, a general drop in several fields overcoming an increase of 2,450 barrels in the Earlsboro pool. Texas outside of the Gulf Coast area showed a 500 barrel increase as a whole, a rise in West Texas production having been checked by losses in Hutchinson County. Southern Louisiana increased from 16,750 to 18,850 barrels during the week with both Lockport and Vinton showing strong gains. A drop at Spindle Top brought the total gain to only 500 barrels. Kansas is up 850 barrels and North Louisiana 450 barrels for the week.

The Empire Pipe Line Company has bought 28 storage tanks from The Texas Company at Cushing. The deal included 160 acres of land. This purchase gives the Empire storage for crude oil at Cushing of 2,640,000 barrels. This company is preparing to lay another pipe line from the Cushing area to Seminole in order to take care of production in that pool.

In addition the Empire is erecting eight tanks of 80,000 barrels each at Seminole.

Prairie Oil & Gas Company is reported to have taken about 1,000,000 barrels of empty storage from the Sinclair Crude oil Purchasing company at Burbank. This is part of the storage provision program of the Prairie.

The tendency in Oklahoma is for the larger concerns to buy and trade tankage among themselves and to buy from smaller concerns to sufficient extent that the excess of present production above requirements will be cared for.

While storage provisions are being made, pipe line deliveries are at record figures. The shipment of 5,449,688 barrels by Prairie Pipe Line Company in March was the highest monthly figure for that company since November 1922.

Magnolia Moves Less

Magnolia's daily average crude runs during March amounted to 119,530 barrels, and this figure represents a decline of 919 barrels below the high mark on runs established in February. Magnolia's crude production and royalty interest in Oklahoma, Kansas, Texas, Louisiana and Arkansas is now averaging about 85,000 barrels daily, and outside crude purchases amount to about 35,000 barrels daily. Most of the

DETAILS ON CRITICAL FIELDS

Pool—	Oil Wells Completed	Total Initial Production	Initial Per Well	No. Producing Wells	Daily Production Barrels	Daily Production Per Well	Rigs Up	Wells Drilling
PANHANDLE—								
Hutchinson County	882	472,260	534	842	99,920	119	26	178
Carson County	105	33,360	318	101	8,355	83	4	65
Gray County	117	31,310	268	114	8,025	70	8	41
Wheeler County	25	9,710	388	22	2,485	113	2	30
Totals	1,129	546,640	484	1,079	118,785	110	40	314
WEST TEXAS—								
Church & Fields	35	43,890	1,254	34	20,090	591(*)	14	38
Gulf-McElroy	15	17,605	1,174	15	11,395	760	..	5
Totals	50	61,495	1,230	49	31,485	643(*)	14	43
(*) Production pinched								
OKLAHOMA—								
Seminole District	391	418,148	1,069	326	338,695	1,038	37	352

crude purchases are being made in the Greater Seminole field and Southern Oklahoma fields, while Magnolia is also a major buyer of crude in the Texas Panhandle, Spindletop, and Lytton Springs fields. Magnolia is credited with having stored considerably more than one million barrels of high gravity oil in Oklahoma and Texas during the past month, including 664,705 barrels produced and purchased above pipe line facilities in Oklahoma, and 278,824 barrels in the Texas Panhandle district in March.

Withdrawal of domestic gasoline jobbers from the Mid-Continent refined market after filling April requirements several weeks ago caused prices to react from a quarter to a half cent. Fuel and other burning oils also reached lower price levels over the past seven day period, thereby placing the refiners on a smaller margin than at any time since the first crude price cut in February. North Texas refiners have sustained a decrease of about 40c per barrel on fuel oil within the past three weeks, and quotations are pointing to lower levels on the prospects of Magnolia's new crude prices becoming general.

Pipe Ordered for Gulf Line From West Texas to Coast

Ten-inch to be built from Midland to Wortham and eight-inch to connect at Lufkin

HOUSTON, Texas. — A second trunk line system for the West Texas district is to be provided by the Gulf Pipe Line Company through the construction of a ten-inch line from Midland via Ranger to Wortham, and an eight-inch line from Wortham to tie into Gulf's Mid-Continent system at Lufkin, located in southeast Texas. Pipe and pump station equipment has been ordered, and will start moving from the mills and factories promptly to permit early completion of the project, which will cost approximately $9,000,000.

The Gulf's line will provide an outlet from 30,000 barrels of crude daily from the West Texas district, and will bring the total pipe line facilities completed and proposed for this district to 110,000 barrels daily. Humble Pipe Line Company's plans to start work promptly with a combination 10 and 12-inch thread and coupled oil line from McCamey to Corpus Christi, a distance of 390 miles was announced in detail last week. Humble has a double eight-inch from Reagan County to Comyn, Comanche County, a distance of 190 miles that has been running West Texas oil since April 18, 1925, at a maximum rate of 40,000 barrels daily, and the new trunk line to Corpus Christi will give Humble a total capacity of 80,000 barrels daily.

The West Texas district averaged 96,705 barrels daily during the past week from 715 flowing and pumping wells scattered over 14 separate counties extending from Jones County on the east to Loving County on the west, with the greater portion of the production located in Reagan, Crane and Upton Counties. This crude ranges from 24 degrees to 40 degrees gravity, and bulk of it is contaminated with sulphur. The potential daily output of crude in the district is probably 10,000 to 15,000 barrels higher than the above figure, since production is pinched on a few wells in Pecos, Winkler and Crane Counties, owing to inadequate storage and pipe line facilities.

Growing crude production in the West Texas district on leases held by Gulf Production Company made it imperative that direct pipe line facilities be provided to market the oil. Gulf averaged 24,820 barrels daily from 37 flowing and pumping wells in Crane, Upton, Winkler, Crockett and Howard Counties, with production pinched in on the Winkler County lease. Gulf averaged 11,395 barrels daily from 15 wells on the McElroy property, located on Crane-Upton County line, and has a proven amount of acreage in this entirely controlled field to furnish daily production in major proportions if drilled.

Ten-inch threaded pipe will be used by the Gulf Pipe Line Company in building from Midland via Ranger to Wortham, a distance of 344 miles, and eight-inch threaded pipe from Wortham to Lufkin, a distance of 103 miles. Gulf has approximately 1,090,000 barrels of steel storage at Wortham, with a six-inch line extending from this tank farm to Lufkin, thence via the Mid-Continent trunk line system to Port Arthur. This six-inch unit will remain in service. Gulf completed and started running oil from its producing leases in the Gulf-McElroy and Church & Fields areas on February 24, 1927 to Midland tank farm. An eight-inch line about 47 miles in length was built in less than four weeks to connect the above properties with tank farm and tank car rack at Midland, where four 55's are completed, and six 80's are building. Gulf has two 80's on the McElroy property.

Will Handle Other Oil

It is reported that Gulf has arranged to handle a limited amount of oil produced in West Texas by Magnolia Petroleum Company to Ranger, until Magnolia Pipe Line Company builds its proposed trunk line.

Ranger will become a major pipe line junction point in the Gulf Pipe Line Company's system, as a 10-inch line junction point in the Gulf Pipe Line Company from the Texas Panhandle terminates at the former place. Gulf has an eight-inch line extending from Ranger, via Fort Worth, to Sal-illo station, located in Northeast Texas, where the West Texas line ties into the Oklahoma unit. The new line, made up of 10-inch from Ranger to Wortham, will materially reduce the mileage involved on getting crude to Port Arthur, while the empty tankage at Wortahm will be available.

About 132 miles of 10-inch pipe will be required to build from Ranger to Wortham, while the distance from Ranger to Midland is 212 miles.

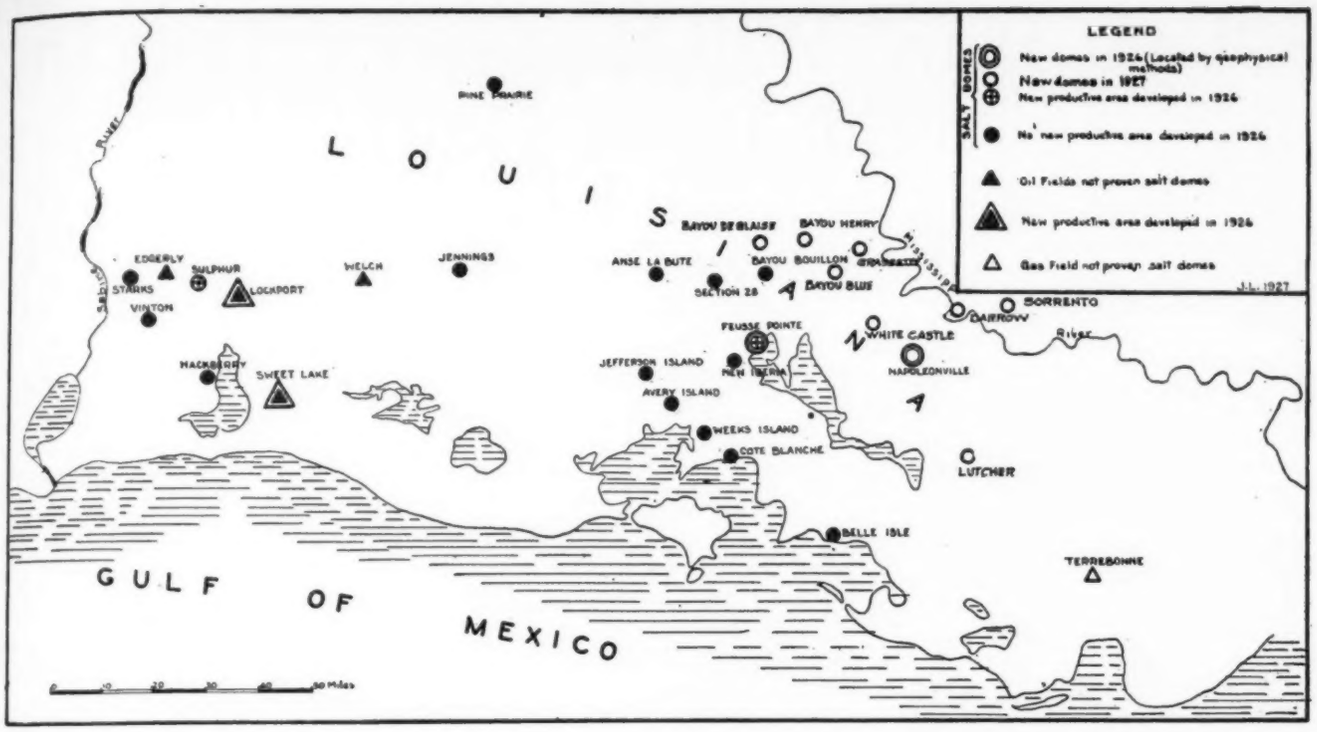
Only one main line pump station between Midland and Ranger is to be built at present by Gulf, owing to the fact that a surface elevation difference of about 1,500 feet exists in favor of pumping oil eastward. The Midland-Ranger section of the line will follow the right-of-way of the Texas & Pacific Railroad the entire distance.

Since Gulf is a heavy lease owner in the Hendricks field, Winkler County, it is understood that an extension line will be built over to this field from Midland in the near future, requiring about 75 miles of line.

Houston Gulf Gas Line Will Be Extended

Houston.—The Houston Gulf Gas Company has sold $2,500,000 in stock to the United Gas and Electric Company, New York. This new financing will enable the company to secure further productive territory and will also make possible the extending of the present pipe line system to these points of production, it has been announced.

Houston Gulf Gas Company now has six producing wells in the White Point gas field near Corpus Christi, and get practically all of its present production from wells owned in the Refugio County field near La Rosa. The company has a long term contract to supply the Houston Gas & Fuel Company with gas for domestic use in Houston, and due to the fact that the United Gas and Electric Company owns the Houston Gas & Fuel Company, the recent arrangement will enable the two companies to cooperate in the fullest for supplying gas for the contract. Aside from this contract the company has several contracts for supplying industrial concerns in the vicinity of Houston.



Seismograph Dome Discoveries Come With Rush

Four companies own large blocks surrounding eight newly located domes in South Louisiana; two east of Mississippi

By WALLACE DAVIS
Staff Representative

THROUGH a recent campaign of seismograph exploration, four major companies got results which stand unparelleled in the history of the search for new potential productive spots by bringing to light six new salt domes and indications of two others within a radius of 60 miles in Southern Louisiana during a period of a few weeks. By this unprecedented rush of discoveries the potential oil reserve of Coastal Louisiana is augmented 36 per cent, considering non-productive domes already known and proven fields, while the new domes raise the percentage of previously discovered domes, which are yet non-productive, 72 per cent. The statement concerning the territory's possible oil reserve is of course an estimate arrived at on a basis of all domes having the same production possibilities.

The area of the new discoveries borders in a general trend along the Mississippi River, five of them lying on the west, one on the east side and a probable additional dome on each side. One point of great significance in the new finds is that they extend the possibility of major production further eastward, marking the first coastal salt dome discovery east of the Mississippi. Another point outstanding in the discovery is the value of geophysical instruments in locating production spots; knowledge of the presence of the domes, which before the coming of geophysics were found and outlined only after vast expenditures in rank wildcatting over periods of several years. Another factor about the discoveries, which no doubt ranks first in importance, is that through use of geophysical methods for discovery practically all of the surrounding acreage is controlled by one company or jointly controlled by two companies, thereby making possible the building up of the oil reserve and yet leased in such a manner as to permit unit development without rush competitive drilling that would flood the market. T acreage considered as productive around the eight newly discovered domes is practically all controlled by the discoverers, most of the land having been blocked up prior to shooting the tracts.

East of Mississippi

The discoveries east of the Mississippi River were made by the Gulf. A dome is rumored as outlined near the town of Darrow, about two and one-half miles east of the river in Assension Parish. Due to a curve of the river at this point, the sections are cut in narrow strips running east and west, and the findings are outlined in a belt reaching from section 19 to 32, in township 10 south, range 2 east, about 12 miles northeast of Napoleonville dome, which was located last year, and four miles north of Donaldsonville, lying in the immediate vicinity of Belle Helene sugar mill.

Sorrento dome is also located in Assension Parish, parts of section 15 and 16, township 10 south, range 4 east. It is about 11 miles north of Convent and 10 miles east and slightly north of Darrow dome. The nearest settlement is McElroy, a small town about two miles south of the dome.

Grassette dome, Baton Rouge Parish, and bordering on the Iberville Parish line, was located by the Gulf as lying in part of sections 59 and 60, 8 south, 11 east, six miles northwest of Plaquemine, on the east bank of Bayou Grassette. It is roughly six miles west of the Mississippi River.

Another Gulf discovery is rumored by indications of a dome in La Fourche Parish, section 63, 15 south, 15 east. The spot has been named Lutcher

(Continued on page 48)

"Unit Plan" Will Be Given Test In Elk Basin Field

Three controlling concerns put development work in the hands of committee—gas drive to be used

By Staff Representative

CASPER, Wyoming. — The unit method of field development is to be given a try if plans of the Midwest Refining Company, Ohio Oil Company and Continental Oil Company go through. These concerns, which practically own the Elk Basin field in Wyoming, have announced their intention of combining in the future development of the area.

The new move has been given the hearty approval of the Federal Oil Conservation Board and the outcome of the venture will be closely watched by the industry.

The three companies have pooled their interests and will operate under the direction of a committee representing each. The Midwest Refining Company is to share approximately fifty per cent of the expenses and the other companies the remainder according to the amount of royalties involved. Revenue will be divided accordingly.

Intake wells are to be selected at once and steps taken to utilize the gas drive.

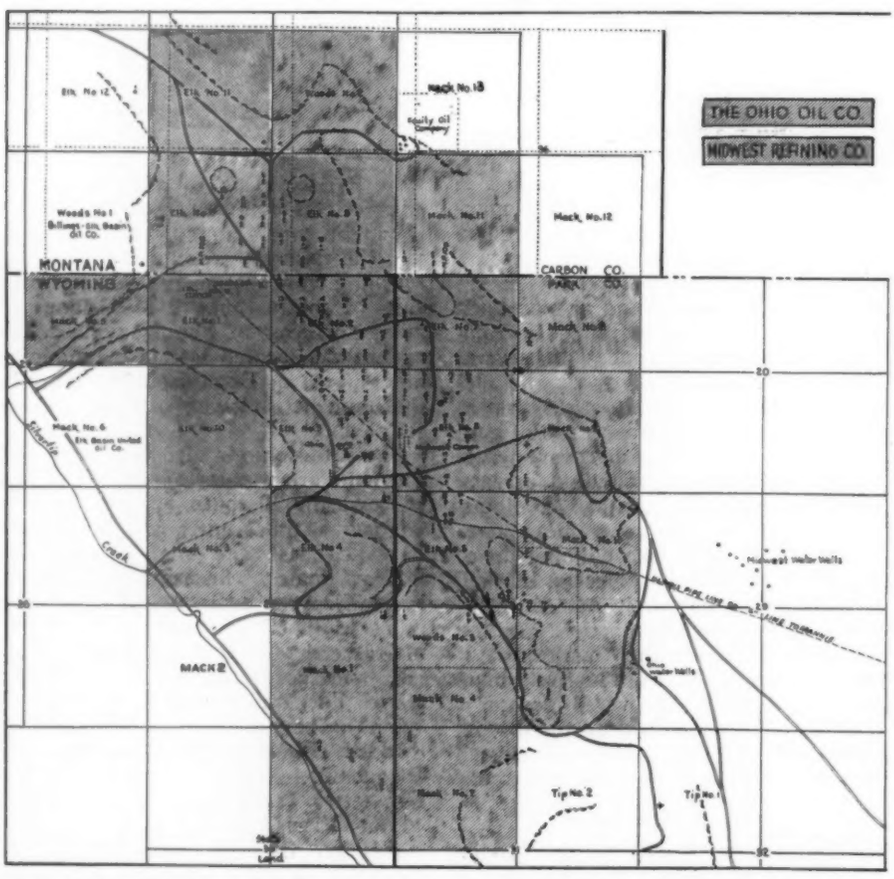
Elk Basin is not a large field but one ideally suited for unit development. Production at present includes both oil and gas with the gas production supplying Billings, Montana, for domestic purposes.

The United States Geological Survey is co-operating with the three companies in this experiment and J. W. Steele, Rocky Mountain Director of the Survey believes that the Elk Basin test is the forerunner of unit control in many large producing districts. He is very enthusiastic over prospects. A. W. Peake of the Midwest Refining Company and John MacFayden of the Ohio Oil Company along with Mr. Steele, have taken active part in arranging for the adoption of such methods of operation at Elk Basin.

The Federal Oil Conservation has issued the following statement commending the new move:

"Chairman Work of the Federal Oil Conservation Board has just learned through the Director of the Geological Survey that the unit control idea is to be given a trial in a Rocky Mountain oil field. The report comes from the Casper, Wyoming, office of the Survey that a plan has been worked out by three companies to operate the Elk Basin field in Wyoming as a unit, under the direction of a committee representing the three companies at present operating independently. The gas drive will be used, the key or input wells being selected regardless of ownership, and the resulting production and operating expenses will be equitably divided between the companies.

"This innovation appears to be based on good engineering and is in direct line with the Conservation Board's recommendation of united and coordinated effort by field cooperation between neighboring operators in building up pressure. Cooperation within the industry in adopting the best practice, strongly urged by the Board, is well illustrated by this action by three leading companies in the Rocky Mountain territory."



ELK BASIN FIELD, WYOMING, TO BE OPERATED ON A UNIT PLAN BY THE OHIO OIL COMPANY, MIDWEST REFINING COMPANY AND THE CONTINENTAL OIL COMPANY. MAP SHOWS HOW ACREAGE IS HELD.

Two 1000 Barrel Wells On Iles Dome

Denver, Colo.—Possibilities of large production from deep sands at Moffat and Tow Creek fields has been opened by completion of two 1000-barrel wells by the Midwest Refining Company on Iles dome, Moffat County. The production is 29 gravity and is believed to be coming from the Sundance sand, lying below the Dakota, which formerly have been the only source of pay around the dome, making small shale producers. The new wells are results of two years of exploration work by Midwest in trying to locate the source of the shale oil found above the Dakota sand.

Project Lance Creek Gas For Nebraska Towns

Casper, Wyo.—A well-organized movement is under way to supply several small cities in western Nebraska with natural gas from the Lance Creek (Wyoming) field. Various organizations in the various cities and towns have pledged their support and the pipe line built would supply a population of more than 25,000 besides several sugar factories and industrial plants. The supply of gas in the Lance Creek field is very large and has been utilized very little in the past. It is very rich in gasoline content.

Comparative Cost of Diesel and Electric Prime Movers

Each has advantages according to engineers familiar with pipe line operating practice

By ROYE MUNSELL
Staff Representative

TULSA.—Whether or not pipe line companies should take advantage of the availability of electric power and install electric motors instead of Diesel engines as prime movers of pipe line pumps, is essentially an economic question, it was pointed out at the meeting of the Mid-Continent Section of the American Society of Mechanical Engineers held here April 7th.

In dealing with the question of electric or Diesel engine power for pipe line pumping stations, S. P. Young, of the Sinclair Pipe Line Company, said that the rapid extension of electric transmission lines in the oil fields and the gradual decrease in electric power rates have forced the issue of electric power on the oil industry.

His answer to the question of electric or Diesel-engine power is that at the present stage of electric power development, the Diesel engine direct connected to a reciprocating pump is more economical at main trunk line pumping stations. "This is because the fuel cost for the Diesel engine installed is less than one-fourth of the cost of electric power, which more than offsets the higher fixed charges of the Diesel engine installation.

"However, due to the lower installation cost of the electric pumping station, it is more economical to make use of a motor installation for temperary gathering stations in a flush field. The period of flush production of such a field is usually from three months to one year's duration."

Electric Installation Cheaper

It was shown by Mr. Young that where an oil pumping installation is to be used for less than three and one-half years, it is more economical to install an electric station. This is provided of course that there is current available at a reasonable rate. Continuing the same point, insistance was made that where the installation is to have a life of more than three and one-half years, it is more economical to use Diesel engines as prime movers.

By comparing the two cost tables accompanying this article it appears that there is a difference in favor of the Diesel station to the amount of $16,856.14.

From these figures Mr. Young secures the basis of his statement that at the present time it is more economical to install electric motors where an oil pumping station less than three and one-half years, such at a temporary location in a flush field for gathering.

The investment in the Diesel station is $95,883.11 and the investment in the electric station is $38,018.15, a difference of $57,864.96.

Dividing $57,864.96 by $16,856.14, the difference in annual operating costs in favor of the Diesel station, gives 41, which is the number of months the Diesel station must be operated to catch up and pass economically the electric driven station.

Where Time is a Factor

In commenting on some of the features of electric drive, Mr. Young said that, "an important advantage of the electric gathering station is that it can be installed and put into operation in less time than a Diesel station. This is due to the smaller machinery foundations required, less time needed to line up and erect the motors, absence of auxiliary machinery, water and fuel tanks, lines, etc.

"The time element is an important commercial advantage in a new field for the first pipe line to start pumping oil gets the first customers, and usually when the field plays out is found to be the last pipe line holding them.

"In fact, being the first to get the business it often sufficient advantage to justify an electric installation even if there were no other economic advantages involved.

"A third advantage of the electric installation is that there is less money left in the ground in the form of concrete machinery foundations, reservoirs, etc., after the field production has declined and the station has been dismantled. In other words, there is a greater percentage of salvage value available in the case of electric stations.

"Another instance in which an electric installation is good economy is in an old field of settled production where the amount of oil pumped is small. In many cases of this kind, a small electric motor, belt connected to a pump, can not only be installed for less expense than a Diesel unit, but can also be operated at a smaller cost, as the field gauger can tend the elec-

Mechanical Engineers Discuss Oil for Fuel at Meeting in Tulsa

Tulsa.—The meeting of the Mid-Continent Section of the American Society of Mechanical Engineers held here April 7 was devoted to discussions of oil as a fuel. This will be the last meeting held by the section during the 1927 season.

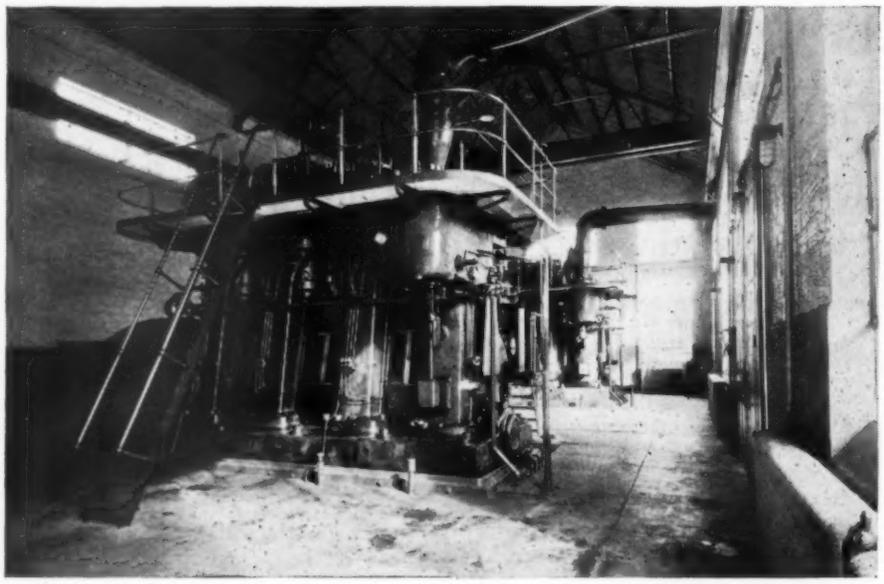
Three prepared papers dealing with the use of oil for fuel were presented. L. A. Mekler, combustion engineer for the Universal Oil Products Company, Chicago, owners of the Dubbs Process, presented a paper on the design and operation of pressure still furnaces for burning oil.

Robert Collett, fuel agent for the St. Louis-San Francisco Railway Company, read a paper on the use of fuel oil in railway locomotives. According to Collett, the general use of oil as locomotive fuel is chiefly concentrated in certain localities where oil is not only more easily obtained but is relatively cheaper than coal. That this is true is shown by the fact that 85 per cent of the consumption of fuel oil by railroads is confined to the Southern Central States and California.

The third paper presented at the meeting was "Oil Pipe Line Power and Fuel Problems," by S. P. Young, of the Sinclair Pipe Line Company.

H. B. Bernard, chairman of the Mid-Continent Section, presided at the meeting and led the discussion of the papers. At this, the last meeting of the year, the officers to serve during the coming year were selected. They were as follows: C. R. Barton, of the Tidal Refining Company, chairman; W. G. Heltzel, Sinclair Pipe Line Company, vice-chairman; F. G. Laney, Smith Separator Company, secretary; and A. J. Kerr, Equitable Meter Company, treasurer.

During the evening a banquet was held at the Mayo. W. L. Abbott, past president of the A. S. M. E., was a special guest. C. A. Rice, of New York, secretary of the A. S. M. E., and Earnest Hartford, also of New York, assistant secretary, were other honor guests.



Above—Interior view of a pumping station on the main trunk line of the Sinclair Pipe Line Company. This is a typical Diesel Engine installation for main line pumping service in the Mid-Continent and is claimed by Mr. Young to be more economical over an extended time.

Below is a table showing the comparative cost of installing a Diesel Engine operated station and a motor driven station for main line pump duty. A Diesel equipped station of 475 H. P. costs $95,-833.11, while an electric installation of 495 H. P. costs $38,018.15.

Installation Cost of 475 H. P. Diesel Station

(Consisting of 3-75 H.P. and 1-250 H.P. Unit and Suction Pumps)

This does not include Manifolds and Field Lines, Stock Tanks, Warehouse, Cottages, Cost of Station Site, etc.

Pump Station Buildings		$ 13,965.70
Machinery	$ 59,099.36	
Machinery Foundations	9,160.62	
Machinery Installations	6,110.00	
Total Machinery (includes all aux. eqp. inside sta. bldg.)		74,369.98
Auxiliary Equipment (outside)		7,547.43
Station Building (water tank, reservoir, and water lines, fuel lines and tank, lub. oil lines.)		
Total Cost		$95,883.11

Operating Cost of 495 H.P. Electrically driven station of 6-75 H.P. Motor Driven and 3-15 H.P. Motor Driven Suction Pump Units

Pump Station Buildings		$ 9,563.00
Machinery	$ 22,623.60	
Machinery Foundations	2,611.03	
Machinery Installations	3,220.52	
Total Machinery		28,455.15
Total Cost		$ 38,018.15

tric station. On the other hand, with a Diesel plant, one man would have to stay with it constantly during operation and an extra man would be required to act as gauger.

Main Line Stations

"To secure the greatest economy of operation of main line pumping stations," Mr. Young said, "we have turned to the use of the Diesel engine as a source of pumping power. Where steam plants have been replaced by Diesel plants, it is because of the fuel economy of this type of engine, as it consumes at full load under ideal conditions 0.45 pounds of fuel or crude oil about 18,000 B.T.U. per pound per brake horsepower. This is for the sizes used in pipe line service.

"Actual monthly averages obtained from Diesel engines operating in main line pump stations show a range of from 0.44 to 0.55 pounds of fuel per brake horsepower. The higher figures are usually due to the operation of the Diesel plant on light loads, such as when the demand for crude by the refineries slackens. The efficiency curve of a Diesel engine is practically level from full load down to about 75 per cent, then it drops off as the load decreases further.

"The Diesel engine is so much more economical in the use of fuel than the steam driven pump fed by either the coal or oil burning boiler that even through the installation cost or total initial investment is somewhat higher than the steam driven pumping machinery, still the total annual cost of operating a Diesel plant, including interest on investment, depreciation, obsolescence, labor, repairs, and fuel, is enough lower than that of a steam plant to justify its general use in pipe line work, and practically all recent pipe line installations use Diesel engine power.

Where Steam is Cheaper

"There are, of course, special conditions where steam is still in use. For instance, many steam driven pipe line pumping plants were erected before the Diesel engine was perfected as a reliable source of power, and it would not pay to go to the considerable expense to convert these plants to Diesel power, as the additional fixed charges incurred by converting steam to Diesel power would in most instances result in higher annual total cost of operation than they are now subject to. Also when pumping heavy crude oil, which due to high viscosity has to be continuously heated throughout the year as in the case of some California and Mexican crudes, it is more economical to use steam pumping equipment. The reason for this is that exhaust steam is available for heating the oil to reduce its viscosity, thereby making it more fluid and less difficult to pump.

"If Diesel power were used here, it would also be necessary to install an auxiliary steam heating plant to heat the oil. This would result in higher total annual costs per barrel pumped than for the steam plant.

"The question might be asked, why not install steam instead of Diesel engine pumping equipment on main trunk lines pumping high gravity crude of high vis-

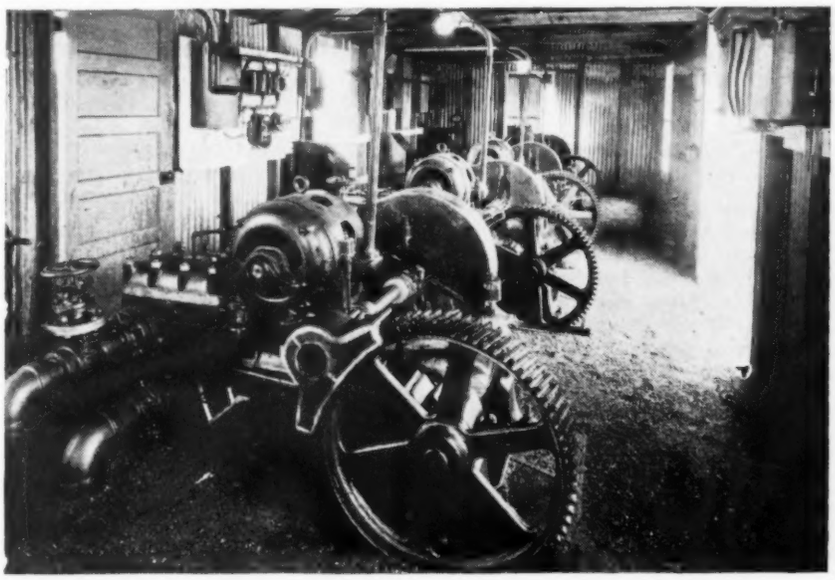
Below is an interior view of a typical moter driven pipe line gathering station in the Mid-Continent field. This type of station is widely used in handling flush production, etc., from new fields

Operating Cost of 475 H. P. Diesel Station
(One 75 H.P. Unit held in reserve as a spare)

Interest and Depreciation at 15%		$ 14,392.47
Machinery Maintenance at $1.40 per installed H.P.		1,900.00
Labor (Same station crew as at Electric Station so will not effect result)		
Cost of Fuel—		
A—When fuel is crude at $2.37 per barrel	$ 10,071.23	
B—When fuel is crude at $1.30 per barrel	5,525.00	
C—Average		7,798.12
Total Annual Charges (less labor)—		
A—For fuel at $2.37 per barrel	$26,363.70	
B—For fuel at $1.30 per barrel	21,817.47	
C—Average total annual charges (less labor)		$ 24,090.59

Operating Cost of 495 H.P. Electric Station

Interest and Depreciation at 15%	$ 5,702.73
Machinery Maintenance at $1.00 per installed H.P.	495.00
Labor (same as for Diesel Station)	
Cost of Electric Power (Average close to 1.4c a KWH)	$ 34,749.00
Total annual charges (less labor)	$ 40,946.73



Above is a table showing the comparative cost of operating a Diesel Engine equipped station and a motor drive installation pumping 24,000 barrels per 24 hours at 600 lbs. pressure with an average total load of 280 brake H. P.

cosity or paraffin content, such as is produced in the Amarillo or Wyoming fields? Some of these oils congeal at about 50 degrees F. and such high pressures are sometimes encountered in pumping these oils that it is some times necessary to heat the oil.

"Pipe lines, however, have installed and are now installing Diesel pumping equipment in their main trunk line stations on lines out of these fields. The reason is that it is only necessary to heat the oil during a few winter months and possibly not even then, as by experience it has been found that, by moving the oil by turbulent flow and keeping it moving continuously, heating is not always necessary, and although the full capacity of the line would not be maintained by pumping the oil cold, it is more economical to lose the pipe line tariff on the decreased amount of crude pumped, than to pay the extra fuel expense of heating to get full pumping capacity.

Fuel Oil Versus Crude Oil

"As to the fuel supply for the Diesel engines in main line stations, there is the choice of using the crude oil taken directly from the pipe line system or of using fuel oil shipped from the nearest refinery.

"This is another question of economics, depending on the market conditions of crude and fuel oil. For instance, around January 1, 1927, 22 to 26 gravity fuel oil could be laid down at a certain main pipe line pumping station for approximately $1.73 per barrel, including freight and handling. At that same time if the 37 gravity crude oil, taken from the pipe line system had been used, the crude oil would have cost $2.37 per barrel. It is evident that in this case it was more economical to use fuel oil (note: Diesel engines in actual Mid-Continent practice have approximately the same fuel consumption using fuel oil of 22 to 26 gravity and crude oil of the gravities as usually produced in Oklahoma and Kansas, the difference, if any, being slightly in favor of the fuel oil.) At the present time (March 15, 1927), 22 to 26 degree gravity fuel oil costs $1.65 laid down at this same pumping station while 37 degree gravity crude is worth only $1.30. Consequently it is now more economical to use crude instead of fuel oil at this particular station. The above procedure has to be figured out separately for each pump station, as some are located so far away from a source of fuel oil supply that the freight rate would make the cost of the delivered fuel oil higher than that of the crude in the line, even when crude is relatively high and fuel oil low in cost. To obtain the lowest or best fuel economy the changes in the market prices of crude and fuel oil have to be watched closely, switching from crude to fuel oil, and vice versa, as the case may be.

Properties of Fuel Oil and Crude

"Diesel engines are designed to operate efficiently and reliably on either crude or fuel oil of practically any gravities from 20 to 40 degrees. Crude taken from the Mid-Continent pipe line system for fuel has the characteristics of oils produced in Oklahoma, Kansas and North Texas. This type of fuel has proven satisfactory for use in Diesel engines. Pipe lines using it as fuel only have to make sure of b.s., fine sand, grit, etc., are drained and strained out of it before using it as Diesel fuel. Fuel strainers on the fuel line to

A. P. I. Conference on Standards in June

New York.—The Semi-Annual Standardization Conference of the Division of Standardization of the American Petroleum Institute will be held in the Broadmoor Hotel, June 15, 16 and 17, at Colorado Springs, Colorado, according to notices recently sent out from institute headquarters.

At this meeting particular attention will be devoted to the development of codes on recommended field practice for the various types of drilling material and equipment under consideration. Papers presented at the Tulsa meeting in 1926, will be the basis for these codes. Additional papers on similar subjects will also be presented at the Colorado meeting.

Particular attention will also be given to the use of A. P. I. specifications already adopted, printed and issued.

Meetings will be held of all committees of the Institute on the standardization of equipment as follows: belting, oil field boilers, cable drilling tool joints, standard rigs and derricks, oil country tubular goods, rig irons, rotary drilling equipment, wire rope and Manila cordage, pumping equipment and engines, and steel tanks for oil storage.

It is recommended that hotel reservations be made early and these should be made direct, but the Division of Standardization, 1508 Kirby Building, asks that it be notified of the attendance. J. Edgar Pew makes this request in order that conference rooms of ample capacity, etc., can be provided for.

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the engine and drains on the fuel storage tank are used to take out of the fuel oil any foreign matter or water that has not settled out in transit.

"In considering this problem of the proper fuel to use on the Diesel engine regardless of whether it be crude or fuel oil, as a general rule, no heavier oils should be used than those which can be burned with a smokeless exhaust. A smoky exhaust means improper fuel combustions and results in leaky and possible sticking exhaust valves. It also increases fuel consumption.

"Oils of from 20 to 40 degrees B gravity are very desirable as far as fluidity is concerned, but oils lighter than this do not contain as many heat units per gallon, and it would be uneconomical to use them, as the cost per gallon is also higher for the higher gravity oils.

"As we have already said, fine sand, grit, and also b.s., and water should be removed from the fuel before it enters the fuel pump of the Diesel engine.

"Basic sediment clogs the fuel valves of the engine and causes many other troubles, while fine sand and grit cause rapid cylinder wear and leaky fuel and fuel pump valves.

"A great deal of the b.s. and water can be separated at the fuel storage tank by having the fuel outlet at some distance above the bottom, allowing the tank settlings to be drained off. The remainder of the fine sand, grit, etc., held in suspension is removed by passing it through a filter or strainer on the fuel line between the storage tank and the fuel pump. This filter is of the twin or triple type so one part can be cleaned while the others are in operation. Such a filter should be regularly cleaned and well taken care of, otherwise it will clog up or allow the impurities to pass through, causing the fuel pump and fuel valves to wear and leak, and also causing rapid cylinder wear and fuel valve trouble.

"Another impurity in the fuel which causes trouble is sulphur. This often forms sulphuric acid, which has a corrosive effect on the exhaust valves and piping. Consulting Diesel engineers state that this corrosive action takes place after the engine is shut down, as the sulphur gases in the exhaust form sulphuric acid with the condensed moisture from the exhaust after the engine being shut down has cooled off, and then get in their corrosive action. Their remedy is to change over just before shutting the engine down from the regular high sulphur content fuel to a special low sulphur grade of fuel. This would expell the sulphur gases from the exhaust before the engines was shut down. They also state it is advisable to start on a high grade fuel, and then switch to the main source of fuel supply.

"In actual pipe line practice it has been found that there is corrosive action on the exhaust valves and piping and also on the fuel pump and fuel valves, and seats, which takes place, not only when the engine is shut down, but also when it is running on a fuel with a relatively high sulphur content.

"This corrosive action can be greatly retarded by using stainless steel fuel pump valves with bronze seats. Fuel pump plungers of a rust resisting material and cast iron fuel needles are also used, as these materials resist corrosion better than steel.

"A high residue content is undesirable. By residue is meant that which remains after the oil has been heated in a closed oven for 120 hours at 575 degrees F. This is a very important feature, as an excess of residue will result in high cylinder wear.

"The ash content is the most detrimental remnant of the combustion of fuel oil in Diesel engines, as an excess of it causes excessive wear of cylinders and exhaust valves. This is because the ash is usually composed of mineral matters such as quartz and silicates, or oxides of iron and aluminum, which mixing with the film of lubricating oil, adhere to the cylinder walls, and accumulate, to cause excessive wear.

"To sum up the characteristics of a desirable fuel for Diesel engines, the following specifications are suggested:

Specifications for Diesel Engine Fuel Oil

"1. The fuel oil shall be free from acid, grit, fibrous material or any foreign matter which is liable to damage the engine mechanism or clog the fuel valves.

"2. Gravity of the fuel oil shall be from 22 to 30 degrees A. P. I., at 60 degrees F.

"3. Flash point may range from 125 to 250 degrees F. (Pensky-Marten closed tester).

"4. Burning point may range from 160 to 300 degrees F.

"5. Heating valve shall be 18,500 B. T. U., or better, per pound of fuel oil.

"6. The sulphur content shall not exceed 1 per cent.

"7. The water content shall not exceed 0.3 of 1 per cent.

"8. The ash content shall not be greater than 0.1 of 1 per cent.

"9. The residue after heating in a closed oven for 120 hours at 575 degrees F. shall not be over 10 per cent.

"10. The viscosity should not be greater than 3000 Saybolt seconds at 40 degrees F.

"11. The volume of fuel oil shall be determined on the basis of 42 gallons per barrel, 231 cubic inches per gallon, at 60 degrees F. For a volume correction at different temperature the National Standard Petroleum Oil Tables shall be used."

Centrifugal Pumps

A recent development in pipe line operation is the use of motor driven centrifugal pumps to increase the capacity of an existing line. The pumps are inserted about midway between the existing stations using reciprocating pumps. This increase in capacity is clearly gained at a cost much less than that which would be required to loop the line, but according to Young, this practice is best only where temporary additional capacity is needed. As for example, where flush production must be handled. The practice of using centrifugal pumps at midway points was not believed to be as economical as looping the line where additional capacity is permanently desired.

Maverick Well Increases While Deepening

Houston.—Rycade Oil Corporation's Chittim 1, which made an initial yield of around 3,000,000 cubic feet of gas spraying between one and two barrels of 57 Baume gravity fluid from 5518 feet several months ago 14 miles northeast of Eagle Pass, Maverick County, increased its production to 8,650,000 cubic feet of gas and 25 barrels of fluid during the past week after being deepened to 5581 feet. A separator has made possible the use of the gas in drilling the well, and a battery of 100-barrel steel storage tanks are taking the fluid production. Hard formation has resulted in the sticking of tools from time to time as the well was being deepened and, while the well was drilled with cable tools, a rotary outfit had to be moved in to loosen tools. Cable tools have again been employed. The hole is still in the process of deepening and was 5581 feet early this week in gray lime. The fluid is practically natural gasoline and colorless.

Sullivan 1, located two miles from the Chittim well, is drilling with cable tools at 3832 feet in gray lime. Rycade controls a solid block of 253,000 acres in leases around the two wildcats.

New Development in Methods of Gas Measurement

Digest of a paper presented to the Southwest division of the Natural Gas Association of America in Dallas

By E. A. CLARK
Oklahoma Natural Gas Corporation, Tulsa

A FEW things have been accomplished in the last few years which have materially affected gas measurement and many causes of trouble have been eilminated. Many of these changes have had very little effect on the number of cubic feet but have made more certain the trend toward better facilities and in many cases the elimination of doubt.

In the first place the physical appearance of the equipment lends a great deal to the measurement of natural gas. Meters should be caretully installed, runs level, pens clean, charts neat, the equipment painted and on important installations possibly trimmed in some other color. Our company has at times been criticised for using so much paint and taking so much pains in seeing that the runs are level. The effect upon the public, the producer, and especially the company's employees far offsets the cost of painting and careful installation. The psychological effect of walking into a meter house such as referred to above must not be overlooked.

The operation and testing of meters can not be stressed too strongly but it is not necessary to go into detail upon the rapid advancement the companies are making in the care of their equipment inside as well as outside.

For domestic service many companies still use the tin meter which was used so satisfactorily in the measurement of artificial gas prior to the rapid increase in natural gas consumption. The iron case meter has increased in popularity from year to year. The use of the curb box meter is attracting considerable attention. In brief the curb box meter cuts down the loss and unaccounted-for gas due to elimination of leaks in the service line from the curb to the residence; it terminates the company's liability at the curb; a more even temperature of gas is maintained and it reduces the necessity for rereading because of inability to get to the meter. It absolutely eliminates stuffing box leaks and the loss of meters by fire.

Better methods and more convenient types of apparatus are gradually being developed and the men are taking more precaution in the operation of their meters, thanks to such valuable instruction as they receive from meter schools meetings of the gas divisions and conservation schools of the utilities associations.

Too much time no doubt is often given to the correction of .1 or .2 of an inch variation in the differential of the orifice of the meter when more attention should be given to the pressure record.

On larger stations a mercury column may be installed and the pressure checked each day. The mercury column should be properly corrected for temperature. In this way a calibration of the pressure spring can be made whenever desired.

Time Element

The time element in orifice meter measurement is another factor being watched closer than ever before. Not over two months ago I was told of a chart changer in charge of several orifice meters in the field who did not even carry a watch. Time on an orifice meter is as important as the pressure or differential. It is important to keep the discs of the orifice meter clean and sharp, especially on the cutting edges. Needless to say discs must be centered on the orifice flange. A deposit such as salt which decreases the size of the orifice increases the differential, but it is surprising what a small amount of deposit on the upstream side of the disc will cause the differential to decrease. A tallow candle rubbed around the cutting edge of the orifice will materially decrease the differential.

To eliminate dirt gathering upon orifice discs dust filters and scrubbers have been developed. In the last few years various types have been designed, but the ones which pass the gas through an oil bath seem to be the most popular.

Equipment in general is being improved rapidly and the manufacturers have realized that too much care cannot be placed upon the construction of the meter and recording gauges.

It is surprising to note that the paper from which charts are being made expands and contracts materially with the change of humidity. The meter manufacturers are taking care of this by making their charts out of paper which has the least amount of expansion with changes of humidity.

Marking Charts

It is important that full information be placed upon the back of the chart, before it leaves the field. Most companies have some form of station number which identifies the setting from which the chart came, and simplifies making the office records. Usually a printed form is stamped on the back of the chart which has a blank space for the station number, disc number, gauge number, the time of changing the chart and other information which may be of value to the chart clerk. In many cases it is advantageous to figure the charts in the field and check them in the general office. This gives quicker action upon a meter which is out of order and the deliveries from the wells can be better regulated to the desired percentage of the open-flow. In the calculation of charts there has been considerable improvement and curtailing of unnecessary work. It is only necessary here to mention such items as setting up of the chart which shows the number of hours in which gas is to be figured passing. We have found good practice, without sacrificing accuracy, to figure coefficients, and use only one decimal place in the calculation of the delivery, one decimal point being used in the extension, three decimal points being used in gravity and the differential being figured to tenths of an inch up to 30 inches. Volume and pressure meter charts are figured on weighted average where it is necessary.

A little over five years ago our company started to use auxiliary control on the low pressure regulators. This has been rapidly followed up, until at present most of the charts taken off of the domestic pressure regulators show almost a perfect circle. The Empire Companies under the jurisdiction of Mr. Hancock were pioneers in this work.

Upon first thought you will probably wonder why I mention regulation in connection with gas measurement. We have found that correct regulation is one of the essentials in measuring gas properly. If the intermediate and domestic pressures are properly regulated the only variable you have in orifice meter measurement is the differen-

Natural Gas Men Talk Extension of Market in Gathering at Dallas

By A. R. McTEE
Staff Representative

DALLAS, Texas.—Leading problems of the natural gas industry were attacked with vigor and a highly constructive attitude at the second quarterly meeting of the Southwest Division of the Natural Gas Association of America, which opened here Tuesday. From the address of wlecome through the various papers and discussions, was emphasized the need of cooperation within the industry for the successful solution of its difficulties as they arise from time to time. The importance of maintaining pleasant public relations by educating the people to the problems of utility corporations was also stressed.

The meeting opened at the Adolphus Hotel, with 160 members present. In his address of welcome, J. W. Everman, Supervisor of Public Utilities for Dallas, touched on the growth in the use of natural gas. He also mentioned the harmony that exists generally between public utilities and regulatory bodies.

E. R. Brown, president of the Magnolia Petroleum Company, in his response to the address of welcome, pointed out the numerous benefits to be derived from such meetings as the present one, dwelling at length on the value of swapping information whereby individual successes can be turned to the good of the whole industry.

In his interesting paper on "The Trend of Gas Measurement," E. A. Clark, of the Oklahoma Natural Gas Corporation, reviewed the latest practices in measuring gas. A considerable part of Mr. Clark's paper was given over to meter developments, and he brought out the advantages of the various types of meters now on the market.

He stated that physical appearance of the metering plant, location of the equipment, its protection, and the care it receives are highly important. Slides were used to demonstrate the features of his article.

Considerable discussion followed the paper, especially the section dealing with straightening vanes. Mr. Clark's paper will be found elsewhere in this issue.

"Building the House Heating Load," was the subject of a paper read by F. M. Rosenkraus, sales manager of the Gas Service Company, Kansas City. Mr. Rosenkraus' paper dealt with the retailing of gas, and had as its theme the boosting of gas consumption through the sale of appliances, chiefly house heating facilities. He detailed methods used by his company in getting new customers and causing old ones to use more gas.

Experiments now being carried on by the Bureau of Mines, looking to the possible working of our new pipe line flow formulae were described by E. L. Rawlins, United States Bureau of Mines, Bartlesville, Oklahoma. This work, according to the author of the paper, is not sufficiently far advanced to suggest the outcome, and no new formulae are certain. However, old ones are being carefully tested through the experiments and new facts may be discovered. Mr. Rawlins went into formulae now in use quite thoroughly, tracing their evolution and application, as a background for the research in prograss. In the discussion following his paper, credit was given the Bureau of Mines for the generous work it has done on behalf of the natural gas industry.

In the afternoon, the meeting was thrown into a round-table session, and a discussion of the merchandising of gas consumed nearly two hours. Chester May, of the Lone Star Gas Company, led this session, and many important selling ideas were expressed by members. It was the unanimous opinion that gas companies should concentrate more on selling problems, and sales departments were advocated. Representatives of those companies now operating such departments gave results of what is being done, and in every instance reported notable gains in business.

Tuesday night the convention was entertainted with a smoker and vaudeville entertainment. A golf tournament was scheduled for Wednesday.

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tial. The differential is then an effective measurement of the variation in the load. The intermediate and domestic pressures are kept at a point such that it is not necessary to have the usual fluctuations in load to build up a depleted line pressure and a decrease in the load to reduce excess in pressure. With proper regulation smaller discs can be used in the orifice meters, lower line pressure can be carried in the field as well as on the intermediate and domestic lines.

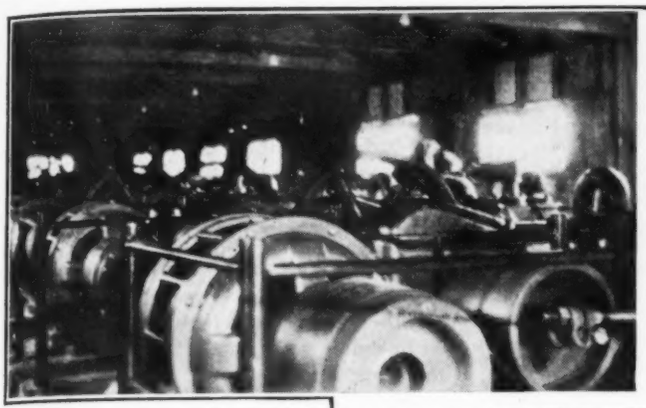
After the success on domestic pressure by the use of auxiliary control and improved supersensitive regulators, a study was started upon intermediate pressures. Tests were run upon different types of regulators aid curves plotted showing the valve travel plotted against pressure in pounds. The test was run with a rising and falling stem. The difference in the two curves shows the fluctuation in pressure to open and close the valves. Regulators took from five to 30 pounds difference in pressure to raise and lower the valve stem. The area between these curves gives a measure of the friction in the regula the oxygen regulator took the place of tor. Some regulators showed as much as six pounds variation caused by friction. It was also discovered that there was considerable change in the effective area of the diaphragm from the closed to open position of the valves. Considerable doubt has been expressed by many engineers as to the extent of this change in effective area. The effective area changed in one regulator, with a seven-inch head, from 14 square inches to 22 square inches. This change in effective area, means, to open the regulator gradually, requires the addition of weights, as the amount of gas passing the valves increases. Of course, the weights must be removed as soon as the load is reduced or the pressure will materially increase on the outlet side before the regulator will close.

This change in effective area was entirely over-come on one type of regulator by using an auxiliary regulator, commonly used on oxygen tanks. The weights and levers were removed, and the inlet of the oxygen regulator connected to the line on the high pressure side. The outlet was connected to the diaphragm case and this pressure from the lever and weights. With this auxiliary control one-fourth of a pound pressure would open and close the valves when no gas was passing. This, I believe conclusively shows that this variation in pressure, shown on the curves, was due to a change in the effective area of the diaphragm.

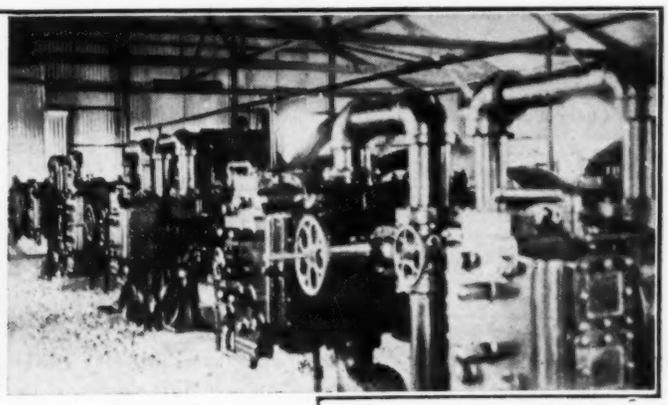
Various types of hubs were tried on the valves. What I have called a hub is the extension placed upon the upper valve by the manufacturers and was intended to keep the valves from chattering and the regulator from vibrating. It was found that the hub on both the upper and lower valves made the regulator very noisy and unsteady. The hub on the upper valve alone caused the regulator, at certain flows, to lose its equilibrium and it would take from five to 15 pounds to bring it back to its original position. Our final conclusion was that valves without any hubs gave by far the best results. The result of the whole investigation, we hope, will be an improvement in the regulators by the manufacturers which, as said before, will truly benefit the measurement of the gas.

One other change, which seems to be a step forward, is the tendency toward

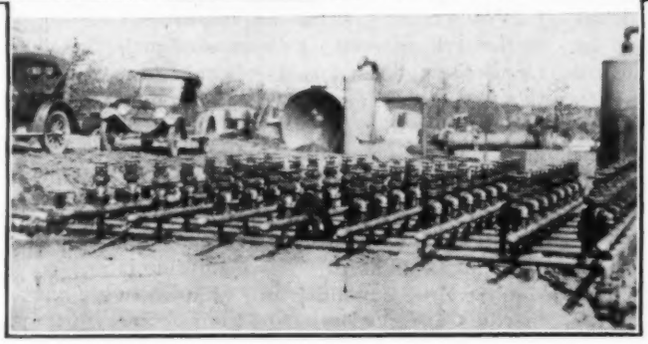
(Continued on page 46)



ABOVE — ELECTRICALLY DRIVEN COMPRESSOR PLANT ON THE M. KILLINGSWORTH LEASE



UTE COMPRESSED AIR OR GAS TO THE WELLS



RIGHT—TYPE OF MANIFOLD USED TO DISTRIB-

ABOVE — INTERIOR OF GAS ENGINE DRIVEN COMPRESSOR PLANT ON THE FLORA CARTER LEASE

Carter Leads Seminole in Lift Work

By GEORGE REID
Staff Representative

WITH ten producing properties in the Seminole field from which 64,680 barrels of oil were taken on March 13, the Carter Oil Company is the leading producer in the district. In October, 1926, this company had only one producing lease in the area; in November, there were two. Thus all of this company's properties with the exception of two, have been developed to their present status during the months of December, January, February and March. In the latter part of February the Carter production was around 50,000 barrels daily from all of its properties, when the storage and pipe line facilities proved inadequate to handle its production. On March 13, the situation was better, these properties produced almost 65,000 barrels of oil on one day. This is not the maximum yield from this company's leases, for even at this time a certain proportion of the producing wells are restricted in their flow and not forced to produce at their greatest output. Of the 64,680 barrels produced on the date mentioned, the air lift system installed on the Carter properties produced 49,840 barrels of the total figure.

Not only is the Carter Company the leading producer in the Seminole area, but it is also leading the field in the production of oil by the application of air-gas lift principles. On March 17 the Carter Company had 84 operations in the Seminole pools, of which number 41 were producing. Of these 41 wells, 23 were operating on the air lift.

Nine Compression Plants

As previously stated, the development work of most of the Carter properties has been done during the last three or four months. Insofar as the air-gas lift program of this company is concerned, the passing of the winter months has seen the erection and installation of nine complete compression plants on as many properties. Several of these plants are of the air compression type while others are of the type usually installed to make up the complete compression gasoline plant which extracts the gasoline from the gas handled, and returned the residue gas back to the wells for artificial stimulation purposes. It is probable that a number of these installations will be further designed to effect the compression of either gas or air as needs may require.

Attending the success of the air-gas lift work of the company has come the formulation of a definite schedule of air-gas compression plant installations. The schedule of compression installations for the purpose of providing air and gas under pressure for flowing the company's well evenly distributes the work over all of the producing properties. Experience has definitely pointed to the economy of this type of operation in the Seminole area, and the work of construction of all plants for this purpose is being rapidly pushed to completion. This program, inclusive of 16 separate compression plants each of which will consist of 6, 8 or 10 compressors, is probably the most extensive air or gas lift system ever proposed by any one producing company. It is thought that the total number of compressors to be used in this somewhat ambitious gas-air lift scheme will be 129—this not including the four portable Ingersoll-Rand machines employed for testing purposes.

for all plants under construction has been received and for the most part is on the ground. Orders have been placed for that material and equipment necessary to the completion of the proposed enlargement of certain plants, and for the one plant which on the table is listed as "planned."

These plants for the most part are

Details of early air-gas lift system as installed and in operation by the Carter Oil Company in the Seminole field as of February 23.

Lease—	Well No.	Location	Date Completed	Initial Production	Last Gauge Before Air Lift	Date Put on Air Lift	Initial Production Air Lift	Production Feb. 15
R. Cudjo	2	35-9-6	2-12-26	295	295	2-15-27	3935	3935
Grisso	2	23-9-6	2-28-26	4350	4500	1- 5-27	6955	6680
Grisso	5	23-9-6	2-16-27	150	20	2-23-27	3000	....
Grisso	6	23-9-6	2- 8-27	320	320	2-15-27	1250	1250
G. E. Killingsworth	1	14-9-6	1-25-27	3580	....	.....	....	2400
G. E. Killingsworth	2	14-9-6	2- 9-27	3600	....	.....	....	....
M. Killingsworth	3	23-9-6	1-25-27	1500	....	.....	....	2480
M. Killingsworth	1	27-9-6	12-28-26	4355	2390	1-25-27	3675	3155
M. Killingsworth	2	27-9-6	2- 1-27	485	485	2-18-27	6165	6058
Strothers	1	34-9-6	1-31-27	4695	4235	2-14-27	5165	4840

equipped with machines which are either driven electrically or by gas engines. In the Mary Killingsworth air plant, Ingersoll-Rand, size 9¼ by 4 by 10, are used to compress air, and are belt driven by General Electric 100-horse-power motors. Safety guards have been installed around the machinery. The flooring in this plant is to be of concrete. The Flora Carter plant, consisting of three Bessemer 165 horse-power compressors, 13½ by 20 inches, low, and 6¼ by 20 inches high stage, which were operating at 50 pounds on the low side and at 200 pounds on the high. The machines are set on concrete bases, with the flooring to be permanently of chat.

Standardized Buildings

Carter Company compression plants are more or less standardized in size and type of housing, being of metal construction. The plant shown in an illustration is located on the Grisso lease and consists of eight Bessemer compressors of the same type as those mentioned above in the Flora Carter installation. This plant, however, is to operate on green gas and is equipped with accumulators and gasoline storage tanks.

The eight machines compressing gas in this plant all discharge into a main manifold constructed just outside of the building, and at this point the flow of gas under pressure is diverted at the will of the operator by the manipulation of hand controlled valves. This manifold is illustrated. The purpose of this design is to accomplish the control of gas flow from the compressor to the well or wells. By means of such manifolding the output of any one, two or three or more compressors may be diverted to a single well or small area where an increased volume of air may temporarily be required. Compressor machines may also be shut down without disturbing the gas flow system at all, for the manifold is simply closed against the shut-down machine and the output of the remaining operating compressors take care of the work at hand. The installation of such manifolds, which lend ease of control and flexibility to the air-gas lift installation, is general practice in the field, although some companies install vertical manifolds, with the control valves raised above the ground a few feet, about breast high to the operator, which makes them convenient to handle. The other type of manifold, placed horizontai lends the same feature of flexibility to the operations.

Study of Back Pressure

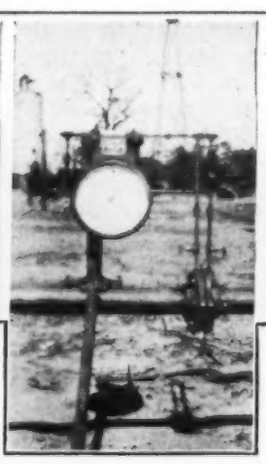
The air-gas lift department of the Carter Oil Company, for whom Mr. S. F. Shaw is acting as consultant, in the development of this system of oil production was among the first in the field to begin the study of the effect upon oil wells of back pressure caused by abrupt angles in flow lines leading from the well to the separator. The volume of gas or air injected into the well is more or less delicately controlled to the extent that the correct volume and pressure is built up to cause the well to flow continuously—and when this point is reached, the elimination of any back pressure is more or less essential to smooth uninterrupted operation. By enlarging the 90 degree angles to 45 degrees, or by providing gentle curves in the flow line, a great deal of the back pressure caused by sharp turns in the flow line is overcome, with the result that the factor of "slippage" is reduced and the well flows with greater ease. In another article this feature was discussed in detail with illustrations showing the types of flow lines provided for the elimination of this back pressure.

The table analyzes the situation of this company's air-gas lift developments up to February 23. At this time there were 10 wells being operated under the gas-air lift systems—a month later there were 23 wells. While this table lacks the details of developments within the last 30 days, it does impart some interesting information relative the success of the gas-air lift installations on the company's wells. An important consideration here lies in the fact that in addition to the general increase of production shown where gas or air lift was installed, there was the accompanying feature of oil production at greatly reduced lifting cost over other lifting methods.

The Carter Company has about completed the installation of recording orifice meters on the intake lines, and likewise is installing meters on all of the lines which conduct gas or air from the separators after it has been recycled through the well. The records received from this and other types of scientific control instruments will be the source of some very interesting information dealing with the gas-oil ratios for the Seminole field.

In addition to the many compression plants installed in the field on the company's various properties for air or gas lift work, the Carter Oil Company also employs the portable type of compressor for testing work, especially where wells are located any great distance from previously installed and operating compression plants.

ONE OF CARTER OIL COMPANY'S COMPRESSION PLANTS, SHOWING TYPE OF STANDARD BUILDING



AT RIGHT—ORIFICE METER RECORDING THE VOLUME OF GAS OR AIR INJECTED INTO THE WELL

PORTABLE COMPRESSORS CONNECTED TO TEST A WELL FOR AIR OR GAS LIFT FLOW. THESE MACHINES ARE USED ON OUT-LYING WELLS UNTIL THE CONSTRUCTION OF LARGER PERMANENT PLANTS IS COMPLETED

Oklahoma Producers Solidly Oppose Severance Tax

By GRADY TRIPLETT
Staff Representative

TULSA.—Oklahoma oil producers in mass meeting here April 8 laid plans for opposing the initiative petition, by which a severance tax of 2 per cent would be imposed on gas and oil in the state.

The petition now on file with the Secretary of State at Oklahoma is an amended measure, differing from that originally filed. The amount of tax proposed is the same as the old. It would however, change the purposes for which the money collected by the severence measure would be spent, devoting it to schools and road building.

In short the bill is one, whose adoption would write into the constitution of Oklahoma a severance tax of two per cent on the value of gas and oil produced and one per cent on lead, zinc, Jack, gold, silver, copper and asphalt.

To become a part of the State constitution it must be adopted at an election. Before it can be submitted, a petition of 60,000 names must be filed in behalf of it. The effort is now being made to get these names to petitions. The measure bears the names of A. K. Berry and James A. Wilson. It is another effort of Campbell Russell to increase taxes on oil produced in Oklahoma.

At their meeing here April 8, Oklahoma oil producers decided to begin their opposition to the measure by seeking to prevent sufficient names being secured by those circulating the petitions. That failing, the campaign of opposition will be carried through to the election.

Henry McGraw, president of the Kansas-Oklahoma Division of the Mid-Continent Oil & Gas Association outlined the position of the Oklahoma petroleum industry in regard to the bill. He called attention to the fact that a measure of similar nature was defeated at a general election last November because of the open campaign of opposition made by the petroleum industry.

"We have a changed situation in regard to this bill," he added. "In a general election, silent vote goes against a measure of this type. In a special election, silent votes can not be so counted. While the last such measure was defeated in the count of 'yes and no' votes, we must look upon this fight as one of different nature."

He outlined the cost to the Oklahoma petroleum industry, if the bill should become part of the constitution, calling attention to the provision whereby the State auditor would have authority to equip wells with meters and other equipment for measure output, provided such were not provided by producers.

Harry H. Smith, secretary of the Mid-Continent Oil & Gas Association, gave a digest of the proposed amendment to the constitution.

His estimate was that adoption of the measure would mean the payment of between $7,000,000 and $9,000,000 additional taxes by the oil industry in Oklahoma. The tax increase would mean the payment of $13,140 a year on each 1,000 barrels of daily production.

He laid particular stress on phases of the bill, which seem to have been so written that the oil industry would be divided on the question. One of these is the reduction of ad valorem taxes on oil in storage and on refining plants and natural gasoline plants. While the measure would add a two per cent severance tax, it would exempt from ad valorem taxation all oil in storage, all tankage for storing it and all equipment for refining and processing it, except an ad valorem tax of two mills for common schools of the district where such property is located.

"It would seem," he said, "that the purpose here is to divide the industry on this measure. An increased tax is proposed for the production of oil, while ad valorem taxes are lightened on oil in storage, the tankage and the equipment used in manufacture."

Then he called attention to the fact that there are many other methods for levying taxes other than ad valorem and warned that property exempted through this measure might mean the raising of occupation taxes and other taxes to offset losses in advalorem taxes.

To clear the question as to where the whole Oklahoma petroleum industry stands on the proposed measure, Mr. McGraw asked each man present to express his position. The vote against the measure was unanimous. The meeting represented pipe line companies and refining companies as well. The vote assured oil producers that the major oil companies present a solid front against the measure.

A steering committee was named to conduct the efforts of the petroleum industry against the measure. This committee is composed of Henry McGraw of the Gypsy Oil Company, Tulsa; John H. Kane of the Phillips Petroleum Company, Bartlesville; W. C. Franklin of the Tidal Oil Company, Tulsa; C. C. Herndon of the Skelly Oil Company, Tulsa; W. E. Wood of the Kingwood Oil Company, Okmulgee; and Wirt Franklin, independent oil producer, Ardmore.

The first effort against the measure will be in opposition to the petition necessary to bring the bill before the voters. This will be a campaign of publicity. Its object will be to acquaint voters with the meaning of the bill.

Oklahoma oil producers now pay a gross production tax of three per cent. The proposed bill would add another two per cent in the form of a severance tax, as a constitutional amendment, making the total tax on oil and gas production five per cent.

The amended bill on file with the Secretary of State reads:

"An act adopting a new section to the Constitution of Oklahoma, to be known as Section 12-B of Article 10, levying a severance tax upon certain natural products severed from the soil; fixing the rate of such levy and the basis of value of the products so taxed; providing for the collection of such taxes and the disposition thereof; limiting the ad valorem tax rate upon such products, and upon equipment used in refining same; making it the duty of the State Auditor to provide for measuring any such products that are escaping unmetered, and making an appropriation therefor."

Be it enacted by the People of the State of Oklahoma:

Section 1. There is hereby adopted a new Section to the Constitution of Oklahoma, to be known as Section 12-B of Article 10, as follows:

Section 12-B. In addition to other taxes now or hereafter legally levied, there is hereby levied a severance tax of two percentum (2%) of the value of all natural gas and crude petroleum and other mineral oil, and one percentum (1%) of the value of all ores bearing lead, zinc, jack, gold, silver or copper, and one perecentum (1%) of the value of all asphalt, produced from the soil. Such tax shall be paid within thirty (30) days after the expiration of each quarter-annual period, expiring respectively on the last day of March, June, September and December of each year. The market value of the said natural products at the time of severence and the place of production shall be the basis of assessment. Such tax shall be paid by the producer of such natural products, except that the tax on the royalty interest shall be paid by the land or royalty owner. Such tax shall be collected by the State Auditor in the manner provided by law for the collection of gross production tax upon said natural products. The State Auditor shall pay the same into the Treasury of the State. One-half of such taxes shall be credited to the common school fund of the state and shall become and remain a part of the permanent school fund of the state, provided that the Legislature shall have the power to provide, from time to time, that of such taxes collected during any year or years, one-half of such school tax may be currently distributed and used for the maintenance of the common schools as provided in Section 3 of Arti-

cle 11, of the Constitution, during the year in which collected. The remaining one-half of such taxes shall be used under the direction and supervision of the State Highway Commission for the construction and maintenance of permanent highways, at least one-half of which shall be used in the county in which produced.

Products upon which the severance tax herein levied has been paid, together with tankage or other equipment for storing the same, shall be exmpt from payment of any and all ad valorem tax in this state except that a tax of not to exceed two mills upon each one dollars value of such property may be annually levied in aid of the common schools of the district in which such property is located. All machinery, appliances and buildings used in refining or processing such products shall be exempt from all ad valorem tax except one-tenth of one percentum of the value thereof, which said one-tenth of one percentum may be levied by the County Excise Board and collected by the County Treasurer to aid in maintaining county government in the county wherein any such property is located. This exemption shall not extend to the land upon which any of such property is located.

The tax herein levied is for the privilege of separating and removing such products from their natural bed or original source of supply and said tax shall be paid upon all such products so separated and removed whether such products are reduced to possession or permitted to escape.

Until otherwise provided by law it shall be the duty of the State Auditor to have each well from which oil or gas is escaping unmetered, properly equipped for measuring all such escaping products and to collect the tax thereon, based upon the value of such products if reduced to possession, also to charge to and collect from the party or parties owning or operating such well, in the same manner as the tax herein levied is collected, all costs incurred in providing, installing and operating such measuring device and equipment.

From the proceeds of the tax herein levied, deductible before same is apportioned, there is hereby appropriated the sum of Fifty Thousand Dollars ($50,000) annually, or so much thereof as may be necessary to enable the State Auditor to properly perform the duties herein provided. The Legislature shall have power to increase or decrease such appropriation for future years as necessity may demand.

CULLED FROM THE NEWS

By Kent Ridley

There is something for the Oil Conservation Board to do even in these times. It has commended the action of the three leading companies in the Rocky Mountain area in getting together for unit operation of the Elk Basin field in Wyoming. The plan also has the approval and encouragement of the United States Geological Survey, and even Judge Beaty will not object seriously. It is now to be seen whether or not approval by the two governmental bureaus mentioned carries the sanction of the department of justice, and if the collaboration of three severed tentacles of the disintegrated octopus will be tolerated, even for squeezing the oil out of a Rocky Mountain.

* * *

Humble's threat of an oil field in East Texas is bringing out some new oil literature of which this is a gem: "A fabulous cornucopia of golden fruit of the nether regions will be poured into their laps," which is here submitted as the most complex metaphor mixture yet presented—and it appeared in Ross Sterling's Houston Post-Dispatch, which so headed ought to know both oil and East Texas.

* * *

Dorothy Dix says that the modern wife must compete with the woman downtown, which probably accounts for her being at the scene of competition about two-thirds of the time.

* * *

Magnolia production executives were taken for a tour of the refinery at Beaumont after a meeting at Dallas. At last a big company has let the men from the field inside the refinery gates. Wonder if it has been decided that the "mysteries" of petroleum refining can be observed by the uninitiated without danger of destroying the foundation of the industry, or have they made it so complex that it does not hurt for the machinery to be seen?

* * *

When the new dictionary is written there will probably be an amended definition of enforcement to comply with the eighteenth amendment.

Buyers at the last Osage auction paid an average of $117.92 per acre for that part of the lease which did not go begging, and the whole sale was more or less of a disappointment. The way tracts were passed up indicates that the buyers know they were taking a long chance. Considering that the land will still remain the property of the Indians, it seems to appear that the tribe is one race that can eat its cake and have it too.

* * *

This department is still collecting evidence for use of Western congressmen to prove their case against the "Standard Oil Trust." The latest item is how promptly the rest of them did not fall in line with Magnolia's last crude cut. Strange as it may seem, producers who sell their oil have a way of remembering who cut the price and good will is an intangible of no small value when the pipe line investment is not making maximum returns, and it is certainly no brotherly act to let one fellow take a leap and then not follow him.

* * *

Oklahoma's oil tax advocates are a persistent bunch. Realizing the absurdity of creating an endowment fund through oil taxation, they still want to impose an additional two per cent tax on oil production. Just what is the distinction between "severance" and "gross production" as applies to oil removed from the ground would be hard to define. But when a politician goes before the people to get votes he has a lot of tricks, and this is one of them. Three and two are five, but the two figures are not so large when you speak of them one at a time, and that is what is proposed to be done when Oklahoma's voters are being advised on this question. Organized opposition is the only means of combatting such onerous proposals as this, and Oklahoma's oil men can not afford to be divided on this subject, even if there is lure in the proposal to change the method of advalorem taxation. There are enough proponents of putting unequal taxes on oil that the men in the industry can well afford to oppose every taxation move on general principles.

North Louisiana Has New Field In Bossier Parish

Louisiana Oil Refining Corporation's wildcat test at Carterville shows for more than 1000 barrels, 32 gravity with big gas flow

By Special Staff Representative

SHREVEPORT, La. — Completion of the Louisiana Oil Refining Corporation's Blanton 1 in the Carterville district, on April 6, virtually assures North Louisiana of another oil producing section; and marks the third oil field to be located in Bossier Parish. The indications for this field had been very promising since the completion of the Woodley and Collins-Atlantic Oil Producing Company's L. and A., the discovery oil producing well in the Carterville district, which was brought in as a 90-barrel sprayer during the latter part of March. The Louisiana's well is the second well to be tested in this area since the completion of the L. and A. of the Woodley and Collins interests, the Bethany Oil and Gas Company having brought in its Dodson well in section 16-23-12 as a 10 to 15-barrel sprayer with 40 million cubic feet of gas, at a depth of 3091 feet. The Blanton well of the Louisiana Oil Refining Corporation was completed at a depth of 3091 feet 7 inches, having been drilled 11 feet into the sand; and is the deepest producing well yet completed in the field, figuring upon mean sea level depth.

Although the Louisiana's well has not yet been kept open for a long enough period to obtain an accurate gauge of its output, it is thought that it will produce at the rate of between 1000 and 2000 barrels of oil per day, along with an estimated 30 to 35 million cubic feet of gas. The well has only been allowed to flow open for two 15-minute periods since it was bailed, and is closed in pending the completion of adequate storage facilities to handle the production. When this has been completed, and when arrangements have been worked out as to the proper method of flowing the well, it will be subjected to a 10-day test, which should accurately determine the future possibilities of this area.

Like Cotton Valley

Indications are that this field will be developed along the same lines as were adopted in the Cotton Valley field, located approximately 20 miles southwest, where open storage pits were constructed for the purpose of conserving the spray of oil after it had been blown into a square, roughly built, wooden room, commonly referred to as a "flow box," since it served the dual purpose of allowing the gas to escape into the air and prevented the oil spray from being blown outside of the pit. The extreme gas pressure present in the Carterville district makes it difficult for operators to secure the oil production without blowing the wells wide open, hence the thought that they will be blown into a specially constructed receptacle fashioned somewhat along the lines of the flow-boxes resorted to in the Cotton Valley district.

It is thought that development of the Carterville field will be hindered to a great extent by the present crude market outlook, as well as the fact that practically all acreage is held by large companies who are not anxious to increase their present production, and who will, no doubt, hold off until market conditions are more favorable. Those wells which have been completed already will, in all probability, be drilled deeper in an effort to tap the same pay sand as that found in the Blanton well, since all of them have been completed at depths shallower than this well. The two most recent wells drilled in this section, Woodley and Collins L. and A. 2 and Bethany Oil and Gas Company's Dodson 1, are only making a very small spray of oil, and it should materially increase the output of each to drill them a few feet deeper into the sand. The Woodley and Collins well is located about one mile northeast of the Louisiana Oil Refining Corporation's well which is, in turn, located approximately one and one-half miles southeast of the Bethany's Dodson well, covering an area of approximately two miles in length, over all. Magnolia Petroleum Company is now drilling a test about midway between the Louisiana's Blanton well and the Bethany's Dodson well.

BLANTON 1 FLOWING WIDE OPEN THROUGH SIX-INCH CASING

Pleasant Hill

The Arkansas Fuel Oil Company is at last drilling plug in its Logan 3 in section 33-10-12, Pleasant Hill district, following about two weeks delay pending the perfecting of titles to the land. Three wells should be drilled in this district in short order, since there are that many with casing set on top of the sand, and all of them will be watched with keen interest following the failure of the Ohio Oil Company's Cook 1 in section 34-10-12, adjoining the Arkansas' discovery lease on the east. The Ohio's well is now drilling at 3400 feet, 200 feet deeper than the Arkansas Fuel Oil Company's discovery well, and has had no trace of the sand found in that well at a depth of around 3200 feet. All of the operating companies in this section are eagerly awaiting the outcome of these tests. More so, perhaps, for the reason that it was predicted by several that the field would never amount to anything, as the discovery well was looked upon as a freak. It is this opinion, in fact, that has prevented a more rapid development of close-in acreage, the majority of lease holders preferring to let the other fellow do the prospecting.

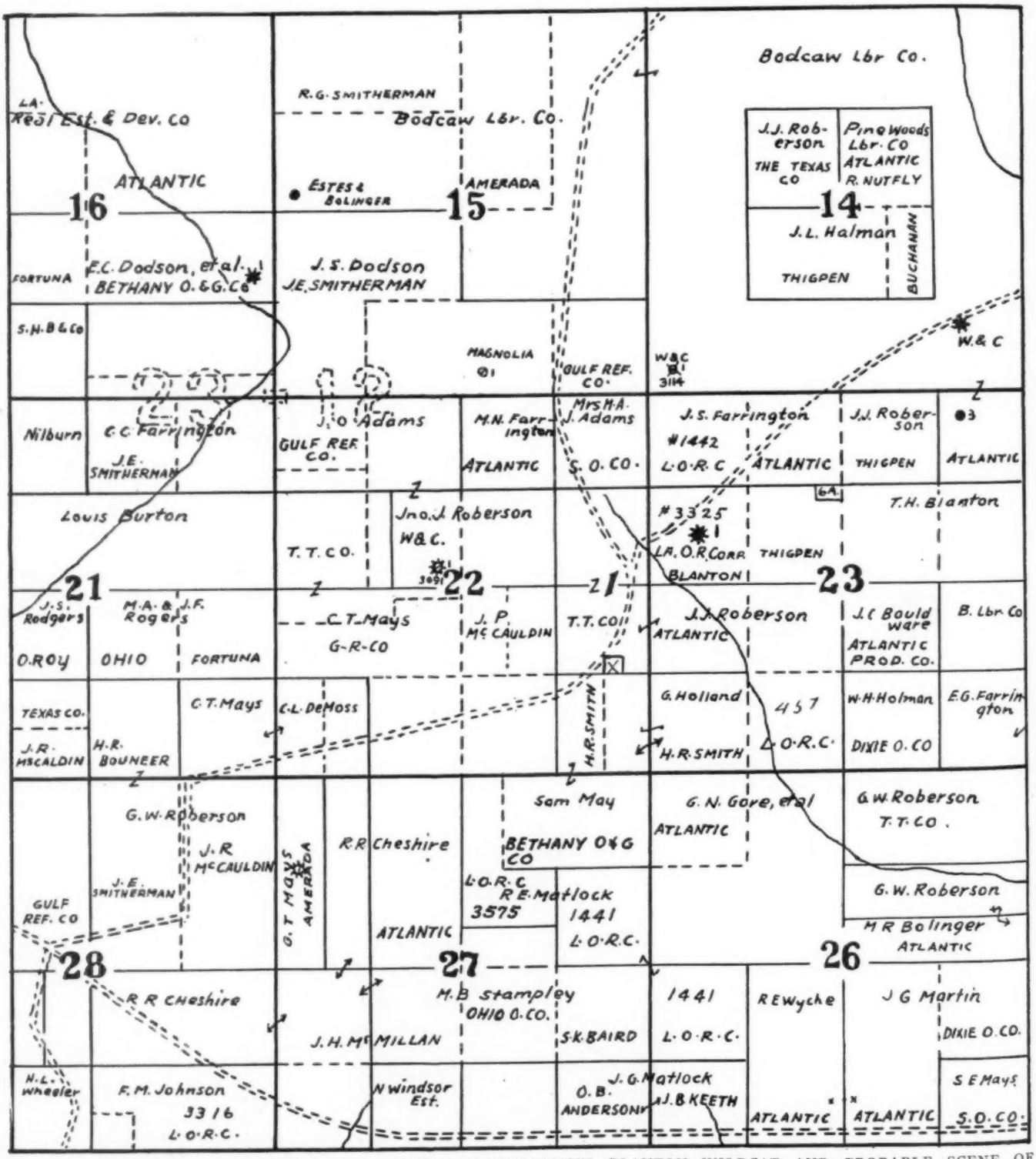
The Texas Company's Herndon 5, Pine Island district, which blew in from a depth of 3590 feet, making an estimated 30 million feet of gas and 500 barrels of oil, and which caught fire soon thereafter and burned five days, was brought under control during the week. The burned out connections were removed and new ones installed, resulting in the closing in of the well without further mishap. The loss incurred in connection with this fire is said to be in the neighborhood of $35,000.

Activity in the Logansport vicinity is reported picking up since the completion of the Avalon Oil Company and Clark and Melat's Payne 1 well, in section 12-11-16, a semi-wildcat which came in producing around 150 barrels of oil and an equal amount of salt water immediately after it had been drilled deeper in an effort to increase its production, coming from a shallower depth. The new pro-

duction, discovered when the well blew in while being deepened with cable tools, is still holding up to around 100 barrels a day, and the well has been connected to the pipe line of The Texas Company, which is now running the oil to Port Arthur. Negotiations are now under way for the purchase of small block of acreage located one-half mile east of the Payne well, and it is thought that a Wichita Falls drilling concern, with whom the deal is pending, will make arrangements to drill several wells on the property. Clark and Melat also plan to drill another well as soon as they have completed their well which is now drilling several miles farther south and on the Texas side of the river.

Arkansas

The Superior Oil Company has successfully overcome a serious fishing job in Cordell 2, located in section 5-18-13, Union County, Urbana-Lawson district, encountered when drill stem was twisted off at a depth of 2945 feet, within about 35 feet of the depth at which cap rock was expected to be found. They were unable to fish out the drill stem lost in the hole, but did succeed in sidetracking it and are now coring at a depth of 2961 feet. The Marine Oil Company is setting six-inch casing in the Thompson A-2, section 10-18-13, at a depth of 2659 feet, after having tested salt water at 2649 feet, and the same company's Winn Estate B-1 in the same section, has been lubricated and killed, and is now pulling lines from a depth of 2691 feet. It is thought that they will drill deeper in search of more prolific pay after having tested a small amount of gas, accompanied by salt water, at the present depth. The Natural Gas and Fuel Corporation's Flenniken 4, in section 8-16-15, has been junked and abandoned at a depth of 2765 feet.



SHOWING LOCATION OF LOUISIANA OIL REFINING CORPORATION'S BLANTON WILDCAT AND PROBABLE SCENE OF NORTH LOUISIANA'S NEWEST FIELD IN BOSSIER PARISH.

Many New Operations Started At Seal Beach

Lease requirements on townlot area more pressing than adverse market situation; only two completions for week

By WM. V. GROSS
Staff Representative

LOS ANGELES.—The number of wells drilling in the Seal Beach, California, field jumped from 88 to 115 during the week ending April 9, despite the temporary shudder of apprehension that swept townlot developers' circles when the Standard slashed California crude prices only to have the present low schedule's stability jeopardized again by the second cut in Mid-Continent crude.

Drilling a well at Seal Beach is about as expensive as drilling anywhere in the Los Angeles Basin, and this fact, coupled with the morose local crude situation should have a checking effect on development. But it does not. Indications are that Seal Beach's exploitation will not slow up appreciably even in the event of another moderate cut in California crude. Rigid lease requirements will have to be met. And when the holes now going down in fulfillment of those requirements begin tapping Seal Beach's none too thick sand, there will be a flash peak and a rapid drop. The fact that Seal Beach can't be expected to last very long as a menace to the proper relation between the state's consumption and production is about the only consoling feature on the California horizon.

Two New Wells

During the past week, two new wells and one workover job were put on production at Seal Beach. All three were property of the Marland Oil Company of California, discoverer of the field. Bixby 2, discovery well of the field, was worked over at 4427 feet and put on production for 1790 barrels of 22.7 gravity oil. The well, which is cutting only 0.6 per cent, shows a tubing pressure of 200 pounds and a casing pressure of 760 pounds. It is flowing through a three-quarter inch bean and the eight and five-eighths inch casing is set at 4399 feet.

After recementing the eight and one-fourth inch casing at 4424 feet, the Marland put its Bixby 5 on production for about 1200 barrels, which is not a poor yield from only 22 feet of perforated pipe. The same company's Bixby 15 at 4425 feet had an initial production estimated at 740 barrels per day. Oil from Bixby 15 tests 23 gravity with a cut of 8 per cent. There is a difference of eight feet in the total depth and the depth at which eight and one-fourth inch casing was cemented.

Many Completions Expected Soon

Some idea of what may be expected in the way of flush from Seal Beach during the next month may be gotten from the fact that 29 wells are drilling below 4000 feet. Several of these are making final preparations for completion. This condition, in a field where production is obtained from 4400 to 4800 feet, indicates considerable flush in the near future.

With the eight and five-eighths inch cemented at 4317, the Associated Oil Company is running in the oil string in Bryant 2. This well has a total depth of 4430 feet and should be put on production in two weeks, barring accidents. The same company's Bryant 4 is standing with the six and one-fourth inch cemented at 4551 feet. Its Hellman 10 is standing at 4436 feet with a satisfactory cement job at 4420 feet.

Five wells recently were killed by the Marland to deepen. Results of the attempt to increase production from these should be known within 10 days or two weeks. In addition to these, the Marland's Bixby 7 is drilling out after having cemented six and one-fourth inch at 4078 feet. This well, which has a total depth of 4684 feet, should be among next week's completions.

Petroleum Securities Company, which has a daily production of 4700 barrels from its two Seal Beach producers, has Naples 4 and Naples 5 standing with eight and five-eighths inch casing cemented at 4710 feet and 4730 feet, respectively. Both will be included in April's list of producers if no accidents occur.

The Standard Oil Company of California's San Gabriel Improvement Company 10, having a total depth of 4724 feet, is standing with nine inch cemented at 4723.

Review of Field Activities

The number of operations, including drilling wells, rigs, locations and producers at Seal Beach, is 199, as compared against 171 for the week ending April 2. The number of drilling wells has increased from 88 to 115, while the number of rigs is 39, or one more that it was last week.

A tabulated resume of operations follows:

Company	Drilling	Rigs	Locations	Producers	Operations	Prod.
Ahlburg Gas Company	..	1	..	..	1	....
Fred Aitkin	..	1	..	..	1	....
Alamitos Oil Company	..	1	..	..	1	....
Associated	8	1	5	3	17	2,100
Bailes, Tom	..	1	..	..	1	....
Bankline Oil Company	..	1	..	..	1	....
Barneson, H. T.	1	..	..	..	1	....
California American Oil Company	1	..	..	..	1	....
California-Eastern	4	1	2	..	7	....
California Petroleum Corporation	11	..	..	..	11	....
Coastal	1	..	..	..	1	....
Craburn Oil Company	1	1	..	..	2	....
Dill & Comstock	1	..	..	..	1	....
Dominguez Extension Oil Company	1	..	..	..	1	....
Erwing, F.	1	1	1	..	3	....
Fisher, Henry	..	1	..	..	1	....
Fleet Petroleum Company	..	1	..	..	1	....
General Petroleum Corporation	9	..	..	..	9	....
Getty, George	7	1	3	..	11	....
Getty, Paul	4	1	1	1	7	4,200
Hart & Company	1	..	..	..	1	....
Hughes & Richmond	1	..	..	..	1	....
Italo-American Petroleum Corporation	..	1	..	..	1	....
Johnson, A.	..	1	..	..	1	....
Marland Oil Company	16	12	1	10	39	10,650
McCaslin, W. E.	1	..	..	..	1	....
McCoy, Deed & Cathers	1	..	..	..	1	....
Miley, E. J.	..	1	..	..	1	....
Pannill, M. W.	..	1	..	..	1	....
Petroleum Securities	21	4	3	2	30	4,700
Rainbow Petroleum Company	1	..	..	..	1	....
Richfield	2	..	..	..	2	....
Roberts, Fred	..	1	..	..	1	....
Robertson, J. T. Company	1	..	..	..	1	....
South Basin Oil Company	1	..	..	..	1	....
Superior Oil Company	5	..	..	..	5	....
Standard Oil Company	3	..	..	9	12	8,450
Travis Drilling Company	1	..	..	..	1	....
Union Petroleum & Drilling Co.	..	1	..	..	1	....
Universal Construction Oil	4	..	..	..	4	....
Walker, F.	1	2	1	..	4	....
Walklin & Peacock	1	..	..	..	1	....
Wheeler, J. G.	1	..	..	..	1	....
Whiston, H. L.	..	..	1	..	1	....
White Eagle Petroleum Company	2	2	2	..	6	....
Totals	115	39	20	25	199	30,100

Constructive Program Arranged For Gas Meeting

All phases of industry covered and many prominent speakers to appear at Natural Gas Association meeting at Cincinnati

CINCINNATI, Ohio.—Plans have been completed for the annual meeting of the Natural Gas Association of America, to be held here from May 10 to May 12 inclusive, and indications point to a meeting filled with constructive thought for the gas industry.

The program is sufficiently varied to cover all phases of the industry, and every session will have speakers of prominence.

Following is the program in detail:

PROGRAM

Monday, May 9, Eastern Standard Time

9:30 A. M.—Opening of exhibition by Natural Gas Supply Men, Inc., in both wings of Music Hall Buildings, Elm Street. The Appliance Hall will be open to the public from 2:00 P. M. to 10:30 P. M. daily except Mondey, May 9.

10:00 A. M.—Meeting of the Technical and Research Committee and Sub-Committees, Hotel Sinton.

12:00 Noon—Luncheon will be served in rear of Machinery Hall, adjoining Auditorium, free to all members wearing badges and holding luncheon tickets, obtainable Monday, Tuesday and Wednesday at Registration Booth, in foyer of Auditorium. Compliments of Natural Gas Supply Men, Inc.

2:00 P. M.—Annual Meeting, Natural Gas Supply Men, Inc., in Auditorium.

4:30 P. M.—Annual Meeting, Board of Directors of The Natural Gas Association of America, Hotel Sinton.

6:30 P. M.—Annual Dinner, Board of Directors of The Natural Gas Association of America, Hotel Sinton.

8:30 P. M.—Vaudeville and Smoker, Roof Garden of Hotel Gibson. A free ticket will be handed to each member at the Registration Booth when registering. Compliments of Natural Gas Supply Men, Inc.

Tuesday, May 10

Meeting of the Natural Gas Association of America, Auditorium of Music Hall. Presiding—R. W. Gallagher, President; N. C. McGowen, Vice-President.

Call to order.

Invocation — Rev. Albert Neilson, Slayton, Rector Calvary Episcopal Church, Clifton, Cincinnati.

Address of Welcome—Hon. Murray Seasongood, Mayor of Cincinnati.

Response—L. K. Langdon, Esq., The Union Gas and Electric Company, Cincinnati.

Address of the President—R. W. Gallagher, President The East Ohio Gas Company, Cleveland, Ohio.

Appointment of Committee on President's Address by N. C. McGowen, Vice-President.

Report of Memorials Committee—Jas. H. Dye, Chairman, The Pure Oil Company, Charleston, W. Va.

Paper: "Education of Employes"—P. G. Vondersmith, The Union Gas and Electric Company, Cincinnati, Ohio. Discussion.

Paper: "Laboratory Developments of Interest to the Natural Gas Industry."—R. M. Conner, Director, Testing Laboratory of American Gas Association, Cleveland, Ohio. Discussion.

Luncheon will be served immediately after the meeting in Machinry Hall adjoining the Auditorium. Secure tickets at Registration Desk.

2:00 P. M.—Report of Wrinkle Committee—W. Re. Brown, Chairman, Editor, "Natural Gas," Pittsburgh, Pa.

Paper: "Selling Gas and Gas Appliances for Domestic Purposes"—Geo. E. Whitwell, Equitable Gas Company, Pittsburgh, Pa. Discussion.

Paper: "Some Aspects of Natural Gas Rates"—Jno. E. Mullin, Esq., Kane, Pennsylvania. Discussion.

Paper: "Selling Gas for Commercial and Small Industrial Uses"—Henry O. Loebell, Surface Combustion Company, New York City. Discussion.

8:00 P. M.—Special night meeting in Auditorium of Music Hall, President R. W. Gallagher, presiding.

Program

Musical Selection.

Address—Dr. Condon, Supt. Cincinnati Public Schools.

Essay—Winner of the Junior Contest on the "Story of Natural Gas."

Musical Selection.

Address — Dr. Herman Schneider, Dean of the College of Engineering of University of Cincinnati.

Essay—Winner of the Senior Contest on the "Story of Natural Gas."

Musical Selection.

Address—Mr. Phillip G. Gossler, President of The Columbia Gas and Electric Corporation.

Moving Pictures — "The Story of Natural Gas."

Wednesday, May 11

9:30—Report of Publicity Committee: H. J. Hoover, Chairman, Cincinnati, Ohio.

Paper: "Meeting the Natural Gas Problems of the Southwest"—N. C. McGowen, Louisiana Gas Company, Shreveport, Louisiana. Discussion.

Question Discussion

The remainder of the day will be devoted to discussion of the following questions, with J. D. Creveling of Henry L. Doherty and Company, New York, acting as chairman.

1—What effective methods do you recommend for reducing distribution system leakage?

2—What practical methods would you use for determining transmission system leakage?

3—What is the practical range for intermediate and low pressure regulators?

4—What practical methods are being used for controlling deliveries from high pressure wells?

5—What method do you regard as most effective in gaining the good will of the consumer?

6—What new methods have been developed for removing fluids from gas pipe lines?

7—What is the value to gas companies of Home Service Departments?

8—How should gas companies promote safety among their employes?

9—What are the new developments in gas meters?

10—What are the practical applications on welding of natural gas lines—field, transmission and distribution?

The annual picture of the convention will be taken immediately after the adjournment of the morning session, followed by the usual luncheon.

2:00 P. M.—Resumption of the Question Discussion.

6:30 P. M.—Twenty-second Annual Banquet, Roof Garden of Hotel Gibson. Toastmaster: W. W. Freeman, Vice-President, Columbia Gas and Electric Corporation, New York.

Speakers: C. J. Hicks, New York City; Dr. John L. Davis, New York City, and one other to be announced later.

Thursday, May 12

9:30 A. M.

Report of Treasurer.

Paper: "The Use of Gas and Air in Oil Recovery"—Frank M. Brewster, Petroleum Reclamation Company, Bradford, Pa. Discussion.

Reports

Technical and Research Committee, H. C. Cooper, Chairman, Pittsburgh, Pa.

Committee on Gas Distribution, J. H. Maxon, Chairman, Muncie, Indiana.

Committee on Gas Measurements, F. M. Towl, Chairman, New York City.

Committee on Gas Utilization, E. D. Leland, Chairman, Pittsburgh, Pa.

Committee on Gas Transportation,

Earlsboro Producing Area Extended to Northeast

Producer is separated from field by dry holes and indicates possibility of production to North and East; more water in wells

By ROYE MUNSELL
Staff Representative

TULSA, Oklahoma.—A probable new producing area northeast of the Earlsboro is indicated by the Magnolia Petroleum Company wildcat on the Holmsley farm, in the southwest of the northeast of the southeast of 11-9-5. The well when drilled in during the past week had an initial production of more than 4200 barrels. The present total depth is 4286 feet in the Wilcox sand. The top of the pay was picked up at 4279 feet.

Prior to drilling in this well was shut down at about one foot in the pay for some time. During that time it was good for from 100 to 150 barrels daily.

Although this well is apparently separated from the Earlsboro field by dry holes, it is important in that deep production exists further to the north and east. It is likely that good producers will be found in the intervening territory.

It is interesting to note that the Magnolia Holmsley producer, in section 11, is only a short distance from the recent wildcat strike of the Prairie Oil & Gas Company, in section 24. The prediction might be hazarded that production will be found connecting the two areas. The Prairie well is still shutdown until market conditions begin to improve.

Another well that might very well be taken to indicate that production in the Earlsboro district is not defined by the present dry holes, is the Phillipe Petroleum Company's Lamar 3, in the northwest of the southwest of the southeast of 9-9-5. This well is only a short distance northwest of the Gypsy-Amerada-Westland, which came in 100 barrels an hour from the Wilcox, but a dry hole separates the two.

A well which is being watched rather closely is the test of the Amerada Petroleum Corporation at its Cowden 1, in the southeast of the southeast of the southwest of 4-9-5. While this well is not yet a producer, it is drilling near the Wilcox with the Sylvian shale and Viola limestone running high, which might indicate that another Wilcox producing area will be found in the neighborhood of section 4. At this location the Viola was found 20 feet higher than at the Earlsboro discovery well in

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H. D. Hancock, Chairman, Kansas City, Mo.
Reports:
Committee on President's Address.
Committee on Place of Meeting.
Committee on Nominations.
Election of Officers and Directors.
Report of Committee on Final Resolutions.
Adjournment.

2:00 P. M—An inspection tour of the electric generating plant of the Columbia Power Company—at Columbia Park, one hour's ride from Cincinnati—will gladly be arranged if sufficient interest is manifested. Members will please express their wishes, when registering on cards provided for the purpose.

SEMINOLE PRODUCTION BY COMPANIES

Company, Lease and Location—	Production
Amerada Petroleum Corp., Rasco, 15-8-6	6,645
Anderson, 15-9-6	10,262
Fixico, 23-9-6	4,510
Rentie, 23-9-6	3,446
Amerada-Gardner, Killings, 24-9-6	2,306
Atlantic Oil Prod. Company, Cudjo, 35-9-6	5,855
Barnsdall Corporation, Carter, 23-9-6	9,272
Jones, 34-9-6	7,381
Carter Oil Company, B, Carter, 24-9-6	210
F. Carter, 24-9-6	130
R. Cudjo, 34-9-6	7,490
W. Cudjo, 34-9-6	1,930
Gilliland, 27-9-6	2,290
Grisso, 23-9-6	7,755
J. F. Killings, 14-9-6	14,662
Knapp, 13-9-6	297
Lukes, 27-9-6	5,495
Simpson, 35-9-6	620
Strothers, 35-9-6	2,335
Vierson, 23-9-6	675
Davis, 4-9-6	9,250
Frazier, 3-9-5	3,440
Scott, 25-10-6	90
Stewart, 34-10-6	515
Bowlegs, 15-8-6	4,360
Walker, 15-8-6	4,785
Wise, 23-8-6	3,115
Empire Gas & Fuel Company, Lacey, 14-8-6	5,777
Wilson, 34-9-6	5,216
Gypsy Oil Company, Butler, 35-9-6	2,189
Carter, 24-9-6	2,945
Fixico, 26-9-6	5,684
Cudjo, 4-9-6	1,230
Walker, 15-8-6	4,175
Gypsy-Amerada-Westland, State land, 16-9-5	1,367
Other production	1,465
Independent O. & G. Company, Fixico, 23-9-6	245
Independent-Inter Ocean, Jones, 26-9-6	1,210
Independent-Garland, Fixico, 26-9-6	1,696
Indian Territory Ill. Oil Co., Bowlegs, 26-9-6	4,226
Gooden, 23-9-6	985
Harjo, 23-9-6	1,549
James, 24-9-6	1,225
Reed, 24-9-6	50
Davis, 13-8-6	4,295
Livingston, 15-8-6	8,360
Magnolia Petroleum Company, Franks, 25-9-6	3,156
Holmsley, 11-9-5	4,230
Mid-Continent Petroleum Corp., McKinley,	455
Grayson, 34-10-6	7,885
Mid-Kansas O. & G. Company, Wilkins, 25-9-6	1,810
Cully, 3-8-6	320
McCullough-Philmack, Butler, 35-9-6	Off
Phillips Petroleum Company, Strothers, 27-9-6	650
Lamar, 9-9-5	3,566
Prairie O. & G. Company, Gross 25-9-6	180
Spencer, 13-9-6	35
Lukes, 27-9-6	10,800
Carter, 10-9-6	60
Houch, 33-10-6	20
Kinkade, 33-10-6	7,605
Pure Oil Company, Strothers, 26-9-6	16,765
Other production	2,510
Roxana Petroleum Corp., Harber, 22-9-6	340
Sinclair Oil & Gas Company, Carter, 13-9-6	60
Cudjo "A", 35-9-6	3,050
Cudjo "B", 35-9-6	5,025
Fixico, 23-9-6	2,515
Polly, 3-9-6	705
T. B. Slick, Cudjo, 35-9-6	4,000
Franks, 35-9-6	9,520
Giblet, 35-9-6	2,205
Superior Oil Corp., Cudjo, 35-9-6	6,985
The Texas Company, Butler, 14-9-6	135
Tidal-Osage, Carter, 24-9-6	3,975
Fixico, 26-9-6	7,925
Harjo, 23-9-6	695
Mahardy, 24-9-6	1,055
Tayoche, 25-9-6	3,310
Turman Oil Company, Cudjo, 35-9-6	6,425
Grisso, 35-9-6	2,290
Jones, 34-9-6	6,279

the northeast corner of section 16-9-5. The Tidal Oil Company, which has the south offset to the Amerada well in section 4, has already started preparations for making a south offset. Should the Amerada well come in for a producer, it is expected that this and other offsets will be started immediately.

Water Intrusion

Several more wells at Earlsboro are reporting water intrusion. The Gypsy-Amerada-Westland discovery well, in the northeast corner of the northwest of the northeast of 16-9-5, is now making 4,000 barrels of oil daily and cutting seven per cent. Previous to this the well made 8,000 barrels daily for several months.

This well is in the northeast corner of the field. In the southwest corner of the field, the same companies' Earl 3, in the southeast corner of the northwest of 16-9-5, is reported cutting four per cent and making 2,000 barrels of oil.

An important failure in the Seminole district during the week was the Hoffer Oil Company, Reed 1, in the northwest of the northeast of 6-6-8, Seminole County. After being found dry at 4,123 feet, the test will be abandoned.

The gains being made in Seminole district production are largely due to completions being made from time to time in the Bowlegs area of Eight-Six. Outstanding in the development there during the past week was the half mile extension made to the northwest by the Amerada Petroleum Corporation with its Rascoe 6, in the northwest of the southwest of the northwest of 15-8-6. This test has an initial production from the Wilcox sand of 2,315 barrels during a 14-hour gauge. It is now flowing at the rate of 175 barrels an hour at the total depth of 4076 feet. The Wilcox sand was picked up at 4,061 feet.

The producing area of the field is now two and one half miles long, running in a diagonal southeast-northwest direction. The area of possible production is by no means limited at this stage of development.

The Carter Oil Company, Wise 1, in the northeast corner of 23-8-6, Bowlegs, produced 100 barrels an hour from the Wilcox sand found at 4,435 feet and drilled to 4,438 feet. This is another case in which a well was low but not low enough to be a good producer. It is several feet lower on the structure, apparently, than the Indian Territory Illuminating Company's Davis 1, in the southwest corner of 13-8-6, a diagonal southwest offset.

Pottawatomie County

The Wrightsman-Pierce-Oil Lease Purchasing wildcat well near Pearson, in the northwest corner of the northeast of the northwest of 30-7-4, Pottawatomie County, which found production in the Hunton lime picked up at 3,757 feet, produced at the rate of around 4,800 barrels when opened up for a short time.

The well is still shut in to a degree until a six inch line now under construction to the well is completed. A temporary two-inch line of the Magnolia to Maud is now caring for a part of the production.

This well, which is 25 miles southwest of Seminole City, is probably the most important widcat strike made in several months.

The Hunton lime at this location was topped at 3,757 feet. The first oil in the pay was picked up at 3,780 feet. Present production is coming from a total depth of 3,793 feet. The oil tests around 36 gravity, which is slightly heavier than Hunton lime production in the Seminole district.

Nearest production is about a mile north in section 16, where Wrightsman drilled in a 100-barrel producer several months ago. The next nearest production is a small pool in section 14 and 15-7-4.

When this well first showed for a producer several weeks ago there was some talk of holding it back until market conditions have improved somewhat. From the ten or so locations which might have been reported staked around it, however, it might appear that development in that area will go forward at a high rate of speed.

Club at Hominy, Oklahoma, is New Departure In Safety Organizations for Oil Men

By RAY E. MILLER

Manager Safety Dept., Marland Companies, Ponca City, Okla.

A NEW departure in organized accident prevention work in the petroleum industry was undertaken at Hominy, Oklahoma, some three months ago by the formation of the Hominy safety club, and subsequent meetings indicate that the organization can and will perform a real safety service in southeastern Osage County.

Last summer while the writer (then Safety Director of the Petroleum Safety Council of the Mid-Continent Oil and Gas Association) was holding a series of Foreman's Safety meetings throughout the Mid-Continent fields, the question of community safety organizations through which operating companies could exchange ideas and experience on safety and operating problems was often discussed. Superintendents and foremen in the producing and pipe line divisions of many fields seemed to feel the need of such a forum but it remained for the men around Hominy to take the initiative and give the idea a thorough trial.

After some months of discussion and correspondence, an invitation was extended to all companies operating in that district to attend the regular monthly Marland employee safety meeting on January 26, 1927. Fifty men from 10 or 12 different companies attended and voted unanimously to perfect an organization. C. B. Houston of the Atlantic Oil Producing Company and W. J. Novack of the Continental Oil Company, who were leaders in arousing interest in the idea, were immediately elected president and vice-president, respectively, and J. L. Steible of the Marland Oil Company was made secretary and treasurer. It was further agreed that regular meetings should be held each month on the last Tuesday of the month, and several organization committees were appointed to report back with constitution, by-laws, etc., at the next regular meeting February 22, 1927.

At the second meeting the officers were made permanent and the following board of directors elected: Thos. Kinney, Sinclair Pipe Line Company; R. R. McAlister, Cosden Pipe Line Company; G. W. Sliger, Gypsy Oil Company; O. A. Quarnstrom, Marland Oil Company, Samuel Peters, McCullough Oil Company; F. R. McDougal, Tidal Oil Company; W. H. Wilson, Indian Territory Illuminating Oil Company; E. R. McIntyre, Twin State Oil Company, and R. D. Schaffner, Valley Osage Oil Company. Constitution and by-laws were adopted, dues fixed and standing committees appointed. The purpose of the club was declared to be the promotion of public and home safety and the prevention of occupational accidents.

In addition to general round table discussion of these purposes at each meeting, the club hopes to have one or two speakers enlisted from the executive ranks and safety departments of the various member companies.

These men have declared it is their belief that accidents can be prevented by safe practices, good housekeeping and interest in the job; and that a quickening of interest and enthusiasm engendered by inter-company group meetings will be reflected by a lessening of accidents and property destruction. They realize their opportunities and obligations for safety education among employees both new and old and are determined to meet the issue squarely.

Theirs is a worthwhile and commendable endeavor and merits the active support of their company executives. Other producing companies are watching their progress and will follow the lead of the Hominy Safety Club as soon as it demonstrates its real value.

PERSONAL MENTION-MEN YOU KNOW

Gordon Fischer, president of Spang, Chalfant and Company, and C. F. Cruciger, vice-president and treasurer of the same company, are on a business trip through the Mid-Continent field and while in Tulsa were the guests of W. M. Bovaird, treasurer and general manager of the Bovaird Supply Company.

W. M. Bovaird, treasurer and general manager of the Bovaird Supply Company, has returned to the company's general offices in Tulsa after an extended business trip to Pittsburgh and other points in the East.

H. W. (Walter) Scott of Smackover, Arkansas, division superintendent of the Simms Oil Company in Louisiana and Arkansas, is visiting in Tulsa renewing acquaintances among his Oklahoma friends.

O. L. Frame now is sales manager of the Robert N. Atmore Company and will make his headquarters at the company's general offices at 913 East First Street in Tulsa. Mr. Frame has been engaged in the supply business for the past several years on the Pacific Coast and in the Mid-Continent field and is a native Oklahoman.

Robert N. Atmore, president of the Robert N. Atmore Company, is on a business trip through Louisiana and Arkansas and will return to Tulsa by way of Texas.

V. F. Masters, consulting geologist formerly of Kansas City, is now located in Farmington, New Mexico, and is specializing on work concerning the San Juan Basin.

Forrest R. Reese has been named chief geologist for the Pierce Petroleum Company and is moving to Tulsa to take over his new duties.

Bill Weed, member of Gulf Production Company's geological department in the Rio Grande River district for the past two years, was in Houston over the past week-end prior to being transferred to Tyler, where the Gulf has opened an office with the growing interest around Boggy Creek field. He is the son of James W. Weed, one of the best known independent operators in the Gulf Coast territory. He is a graduate of the University of Texas in 1925, where he specialized in geology.

Directors and stockholders of the Phillips Petroleum Company will leave New York on a special train April 14 for a tour of the Mid-Continent fields. Following the trip through the fields, the party will attend the annual meeting of the company which is to be held in Bartlesville, on April 19.

Mark E. Davis, vice president of the Oil Well Improvements Company, died at Tulsa, April 6, following an illness of a month. The funeral was held there and the body forwarded to Youngstown, Ohio, for burial. Aside from his manufacturing interests, Mr. Davis was an oil producer, being associated with Alf G. Heggem, president of the Oil Well Improvements Company. He came to the Mid-Continent in 1912 from Youngstown.

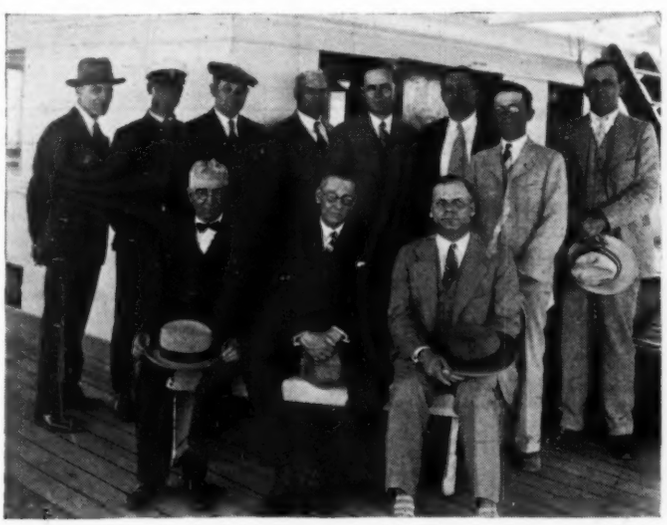
H. S. Lindemuth, formerly district manager of the International Supply Company, has now joined the organization of the Lucey Products Corporation, with headquarters at Tulsa. He will specialize on Lucey rotary drilling equipment and further the introduction of Manganese steel to the oil industry.

W. A. Williams, president of Crown-Central Petroleum Company, Houston, returned to his headquarters early this week from a two weeks trip to New York City.

Moe-Calpet Well Makes 1000 Barrels

Great Falls, Mont.—The Moe-Calpet pool, which has been steadily in the limelight since its discovery several years ago, has scored heavily with a 1000-barrel flowing well on the southeast quarter of section 28-35-2. The California Petroleum Company completed the well at 1475 feet and the location is only a short distance from a dry hole. An unusual feature of the completion was that the Ellis sand was found lower than in some of the failures nearby. Production did not decline as steadily as in large producers in other parts of the field. It promises to be a consistent producer.

Lockport Crude Moving by Tanker



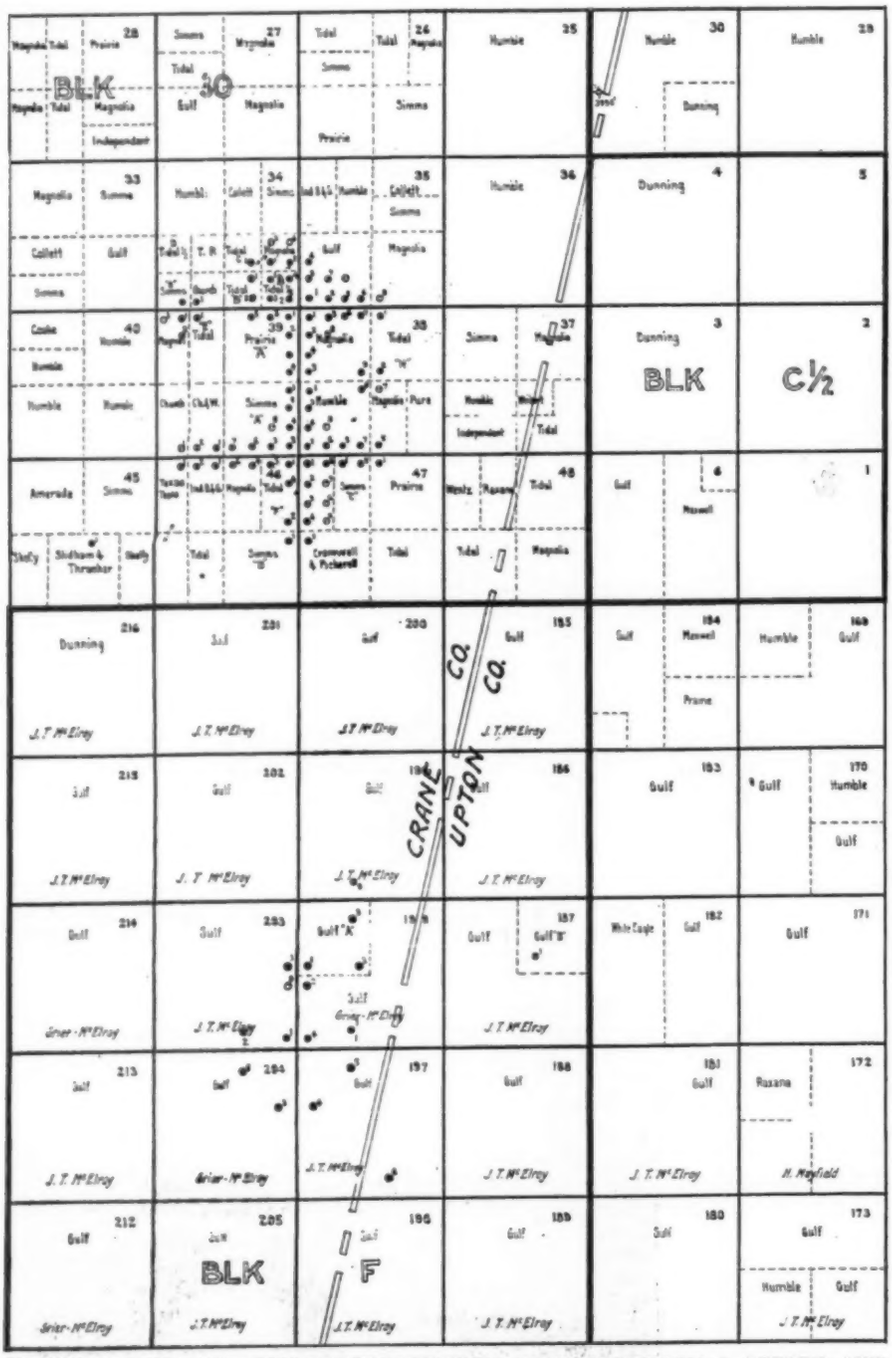
Among the honor guests at Lockport harbor opening: Left to right, standing: W. L. Conover, Capt. Pope, Wm. A. Vinson, Wm. B. Sutton, R. L. Dudley, O. H. Eichelberger, O. B. Crozier. Sitting, left to right: Wm. Hastings, Ernest Smith, and W. C. Thomas.

The Paulsboro, 72,000 barrel tanker, turning around near deep water docks at Lockport with first direct shipment of Lockport crude to Paulsboro, New Jersey.

West Texas Fields Show Greater Production Possibilities

By H. H. KING
Staff Representative

SAN ANGELO, Texas. — The Church & Fields area in Northeastern Crane County increased its daily output to above 30,000 barrels early this week with the completion of several heavy producers in the lower end of the field while the Hendricks field in Winkler County offered more proof of flush production possibilities by contributing its third producer making 80 barrels of 30 degree gravity oil hourly at 2908-27 feet. Rapidly mounting crude production in West Texas counties has attracted a second trunk line system, as Gulf Pipe Line Company is starting work on a 10-inch line from Midland via Ranger to Wortham, with a new eight-inch line supplementing a six-inch carrier from Wortham to Lufkin. This new line makes two new outlets for the district, as Humble's combination 10 and 12-inch line from McCamey to Corpus Christi was announced last week. Humble already has 40,000 barrels capacity in service from McCamey to the Gulf Coast via Comyn station, Comanche County, while its new line and that of the Gulf will boost the West Texas pipe line facilities to 110,000 barrels daily.



SHOWING THE LATE FIELD DEVELOPMENT IN THE CHURCH & FIELDS AND GULF-McELROY AREAS IN CRANE COUNTY, WEST TEXAS DISTRICT. THESE TWO FIELDS PROMISE TO BE CONNECTED BY THE DEVELOPMENT OF THE NORTH END OF GULF'S ACREAGE.

The Southern Crude Oil Purchasing Company's Hendricks 1-C, a south offset to the Winkler County discovery producer, came in Tuesday with an initial flow of 80 barrels per hour from sandy-lime pay at 2908-27 feet, and further complicated the efforts of operators to fix the pay level depth of the field. The discovery well is producing from pay at 2965-3049 feet at the rate of 365 barrels natural flow daily, while Gulf's Hendricks 1, a southeast offset to the discovery and an east offset to Southern's new producer, flowed 180 barrels per hour initial at 2824-42 feet, and was pinched to 450 barrels daily during the past week. Independent Oil & Gas Company's Hendricks 1, a west offset to the discovery well, developed a flow of gas at 2797-2815 feet and a light spray of oil at 2825 feet early this week and is setting 6⅝-inch casing to drill in. These four wells have proven as many different pay horizons, and all are practically on the same surface elevation. The Independent test failed to encounter salt while the other three producers logged the top of the salt at depths ranging from 1665 to 1930 feet. The big lime horizon was logged in these four tests at depths ranging from 2538 to 2720 feet. Only three more producers are to be completed in the Hendricks field until crude market conditions improve, according to an agreement made several weeks ago by operators.

Church & Fields

The Church & Fields area is heading for new production records almost daily due to the completion of wells in the flush section of the field, and during the past week a daily average of 20,090 barrels was maintained from 34 flowing and pumping wells, or 591 barrels daily per well. The Simms-Atlan-

tic's University 2-A, which was the first big well in the field having been completed February 13 making 8000 barrels open flow and killed by back pressure April 2, was restored to natural flow April 7 by swabbing. This well produced 126,00 barrels before going dead, and came back with a flow of 120 barrels hourly, but soon dropped to less than 80 barrels per hour. A number of other large wells in the field have yielded more than 100,000 barrels by natural flow.

Eastland Oil Company & Collett-O'Keefe's University 8 widened the flush area in the lower end of the field to the east late last week flowing 3,500 barrels initial at 2849-98 feet, while Simms & Atlantic's University 1-C, an east offset, found the pay tight and hard with an initial flow of 340 barrels daily at 2804-90 feet. Tidal Oil Company & Turman-Maxwell's University 2-F flowed 1580 barrels initial early this week at 2820-2915 feet, and is drilling ahead. Eastland et al's University 4, an east offset to the latter producer, flowed 1125 barrels while drilling pay at 2836-2909 feet. Gulf's University 4, located on the north end of the field, gauged 1075 barrels initial at 3012-83 feet, while all the tests on the adjoining lease have been small pumpers.

The Yates shallow field in Eastern Pecos County furnished 9090 barrels of 30 degree gravity oil during 24-hour open flow on the four completed wells early last week, indicating that the pinching of the wells has not curtailed their output. This test flow was made in the presence of officials of the Mid-Kansas Oil & Gas Company, joint owners with Transcontinental Oil Company in the property, and Ohio Oil Company and Illinois Pipe Line Company.

Panhandle Storage Makes Big Gain During March

By H. H. KING
Staff Representative

AMARILLO, Texas. — Crude stocks accumulated in the Texas Panhandle district during the month of March at an average rate of 76,686 barrels daily as result of tank car shipments by producers and purchasers being reduced more than half as compared to the January movement of oil in tank cars. The crude stock increase in March amounted to 2,387,-280 barrels, thereby giving the district a total of 14,674,440 barrels of storage oil on April 1. The district is well fortified with empty storage facilities to handle the current production until the three trunk lines are completed, as approximately 7,750,000 barrels of idle tankage was available for use at the close of March, with six additional 55's being erected by Prairie, Humble and Magnolia.

Independent operators in the Texas Panhandle began storing crude in large quantities during March as result of the posted prices being reduced to 95 cents in Carson and Hutchinson Counties, and only slightly higher in Gray and Wheeler Counties. These independents constructed steel tankage last fall as protection against over-production and abnormally low crude prices, but only a few elected to make use of their tankage until the posted price dropped below the one dollar mark.

Magnolia has built up the greatest amount of storage in the district by reason of not having used tank cars for moving a portion of the daily runs, as has been done by all the other crude purchasers. Magnolia reported 3,721,-075 barrels at the close of March, and Gulf held second place with 2,814,700 barrels. These two companies will begin drawing on storage late this month, as their jointly owned 10-inch pipe line outlet has been completed, giving each a daily outlet for 15,000 barrels of oil. Gulf has been a heavy tank car shipper of crude from the district since the first of the year through having sold a one-half million barrels of Carson-Hutchinson crude to Swiftsure Petroleum Company to be delivered at rate of 100,000 barrels monthly from tank car rack at Panhandle.

Phillips Petroleum Company has accumulated 2,596,725 barrels of crude stocks, despite heavy tank car shipments applying against contracts made prior to and after the posting of lower prices. Phillips has arranged for an additional half million barrels of storage room from the Plains Pipe Line Company's tank farm on the Carson-Hutchinson County line, and will fill this tankage to hold the oil for better prices. Phillips has a contract to deliver 10,000 barrels of crude daily to Humble Pipe Line Company, made in December, 1926, and effective March 1, 1927. Humble's crude stocks in the Panhandle were more than doubled in March, having jumped from 426,625 to 881,570 barrels. Humble is scheduled to complete its 10-inch pipe line into the district about June 1, or sooner. Prairie has accumulated 1,428,840 barrels of storage oil against the eight-inch line being built from Ringling, Oklahoma, and has been making tank car shipments to Mexia in order to avoid an added steel tankage expense.

Natural Gasoline

Tank car movement during March from the Panhandle amounted to 6270 cars, as compared to 12,645 cars moved in January, indicating a drop of more than 50 per cent. Phillips, Marland, Sinclair, Prairie, Humble and Roxana were the heaviest shippers. Natural gasoline production in the Texas Panhandle district is now providing a big source of revenue for producers and royalty owners, even though the market price for this commodity is at a low level, and during March a total of 8,214,000 gallons were manufactured.

Field development in the Texas Panhandle showed the effect of a general curtailment of drilling over the past week, and production also went to a lower level, while Hutchinson County dropped below 100,000 barrels daily. In the Shamrock field, Wheeler County, the Mid-Kansas Oil & Gas Company's W. S. Curlee 2 gauged 640 barrels natural from granite-wash pay at 2301-26 feet after casing off five million feet of gas at 2275-80 feet. In the Eastern part of Gray County, Empire's L. H. Webb 1, located on a wildcat block in section 59, block 25, is showing a small amount of oil at 2850-56 feet after passing up a show at 2457-feet. This test has a surface elevation of 2565 feet, and logged the top of the big lime at 1644 feet. In the Sanford-Paramount area of Hutchinson County, the Phillips Petroleum Company et al's Sanford 1 was placed on air late last week and responded with a flow of 1600 barrels of oil during the first 13 hours.

Crude stocks in the Texas Panhandle district at the close of March is listed below by companies.

Magnolia Pipe Line Co.	3,721,075
Gulf Pipe Line Co.	2,814,700
Phillips Pet. Co.	2,596,725
Prairie Pipe Line Co.	1,428,840
Marland Pipe Line Co.	1,076,030
Humble Pipe Line Co.	881,570
Skelly Oil Company	841,300
Plains Pipe Line Co.	512,365
Dixon Creek Oil Co.	228,450
Empire Gas & Fuel Co.	119,250
Mid-West Explo. Co.	80,050
Bell Oil & Gas Co.	100,000
Atlantic Oil Prod. Co.	60,250
Japhet Prod. Co.	56,980
Coble-Whittenburg Oil Co...	39,995
Devonian Oil Co.	39,660
Roxana Pet. Corp.	36,685
McIlroy-Herring Oil Co. ...	35,000
Champlin Ref. Co.	5,515
Totals	14,674,440

New Developments in Methods of Gas Measurement

Continued from page 32)

the use of smaller ratios of the diameter of the orifice to the diameter of the pipe, or the ratio of d/D. On city gate measurement this of course means more tubes but it has the advantage of making the station more flexible during changes in load. Differential valves can be used very effectively with the increase in the number of tubes if so desired.

Considerable improvement has also been made toward the elimination of pulsation from compressor stations.

Several years ago it was found that at certain times, in one of the Oklahoma Natural Gas Corporation's stations, the inlet meters showed less than the check meters on the opposite side of the street. After considerable investigation it was decided that this variation and fluctuation in the differential was due to the fact that the gas was passing from the regulator to the flange in a spiral motion.

Knowing the government found it necessary to use straightening vanes in the aeroplane wind tunnels at McCook field, Dayton, Ohio, we decided to make a similar installation here. The result was a decrease in the variation between the inlet and outlet meters, the differential steadied down and we were surprised to find the vanes decreased the noise from the station about one-half.

The Technical Reserach Committee of the Natural Gas Association used the straightening vanes in determining coefficients for their parent orifices at Cleveland. They spent the greater part of last summer at Buffalo testing the effect of straightening vanes on orifice meters. The results of this work is looked forward to with a great deal of interest and no doubt will give us new requirements for setting up a standard orifice meter run.

Important Purchase of Mountain Leases

Los Angeles, Calif.—Consummating one of the most extensive oil lease deals in years, Standard Petroleum of New Mexico, Incorporated, purchased April 5 from the Navajo Oil Company 80 80-acre oil leases, scattered on the main structures in New Mexico and extending from the San Juan Basin in the northwest corner to the Artesia field in the southeast corner.

At the same time Standard Petroleum acquired from Ralph Arnold and associates an interest in leases on from 200,000 to 300,000 acres in Montana, Wyoming, Colorado and Utah. This land was selected by Mr. Arnold and his associates and will be developed under the supervision of Mr. Arnold. The two deals give Standard Petroleum holdings across the entire Mid-Continent field.

The New Mexico holdings of Standard Petroleum are on proven structures; other adjoining leases now being drilled or under contract with major companies.

Standard Petroleum was recently incorporated by Los Angeles men. Its Advisory Board is as follows:

Ralph Arnold, geologist, petroleum engineer; C. C. Magenheimer, oil operator; John H. Blair, De Witt-Blair Corporation and president Blair Mortgage and realty Co.; Dr. Harlan Shoemaker, secretary Los Angeles County Medical Association; D. B. Head, United States Commissioner; Elliott Kelly and J. W. Brown, oil operator.

Young County Well Flows 250 Barrel

Fort Worth, Texas.—E. C. Stovall's Fee 5, located on Lot 30, James Tobin Survey, South Bend field of Young County, made 250 barrels of 40 gravity oil early this week from lime pay at 3896-3900 feet, adding the second large producer to this section early this week.

McLester Oil Company et al's Thorp 1, located in upper Eastland County, gauged 50 barrels per hour natural from one foot of pay at 3801 feet.

Second Boggy Creek Well Going Down

Houston.—Humble Oil & Refining Company's Earle & Ragsdale 2, northeast offset to the Boggy Creek discovery well, was drilling Tuesday night of this week at 469 feet in shale and boulders. It is the first active location following the Humble's discovery in Cherokee County.

Humble staked a location Sunday for its Spencer Clemons 1, 1100 feet south of the north line and 300 feet east of the west line of the Spencer Clemons west 80 acres out of the H. C. Sassamon Survey. This location is in Anderson County, across the Neches River from the discovery well and about two miles southwest.

A third location has been made by Humble for the Reynolds Mortgage 1, but the exact location has not been announced.

Rig Burned on Test at Teapot Dome

Casper, Wyo.—The rig and part of the equipment of the Margalexon Oil Company, which operates along the edge of Teapot dome, were destroyed by fire recently. The test has been a very interesting one and had found production in the shales corresponding to those found on the main Teapot dome. Another rig will be erected and the test continued to a depth of 4500 feet if necessary. The well probably will produce later from the shale at 2300 feet, where commercial production was found.

Brenham Field to Have Pipe Line Outlet

Brenham, Texas.—Pratt et al have recently purchased from J. A. Conklin et al the Hess 114-acre lease in Brenham shallow field, which includes two small producers, for a consideration of $20,000. This trade follows considerable exploration activity in the Brenham territory, which has led to the starting of several tests.

Sun Company is expected to start a wildcat test on its large block of acreage surrounding Ferguson dome on the Yegua River about three miles from Brenham shallow production.

A group of Dallas men are now surveying a right-of-way from Brenham field to Mill Creek Switch on the Southern Pacific for a four-inch line, and contracts have been secured by the line builders for all of Brenham's shallow production. It will have the capacity of handling considerably more oil than the 130 barrels being produced now at Brenham field, and is built in expectation of deeper strikes around the production area.

Three wells are now drilling in the immediate Brenham area, including Charles A. DeWare's A. C. Lehman 1, drilling late last week at 2601 feet in shale and boulders, Schurenburg 1, temporarily shutdown awaiting rock cutters to go through rock at 1530 feet, and Pratt and Associates' Konieczny 2, drilling at 2095 feet in water sand.

Starting Many Wells in Southwest Wyoming

Casper, Wyo.—With the advent of spring, the long heralded activities in southwestern Wyoming are under way. A dozen wells are ready to begin drilling as soon as necessary equipment is put on the ground. The Texas Production Company and the California Petroleum Company are two of the largest leaseholders. This region has offered attractive opportunities to the independent operator and the La Barge field and vicinity is dotted with small leaseholders. Production is shallow and the wells small. The region is remotely located and offers many difficulties in drilling for and marketing the oil. Oil was discovered nearly 50 years ago but development has been slow because no large pools have been found.

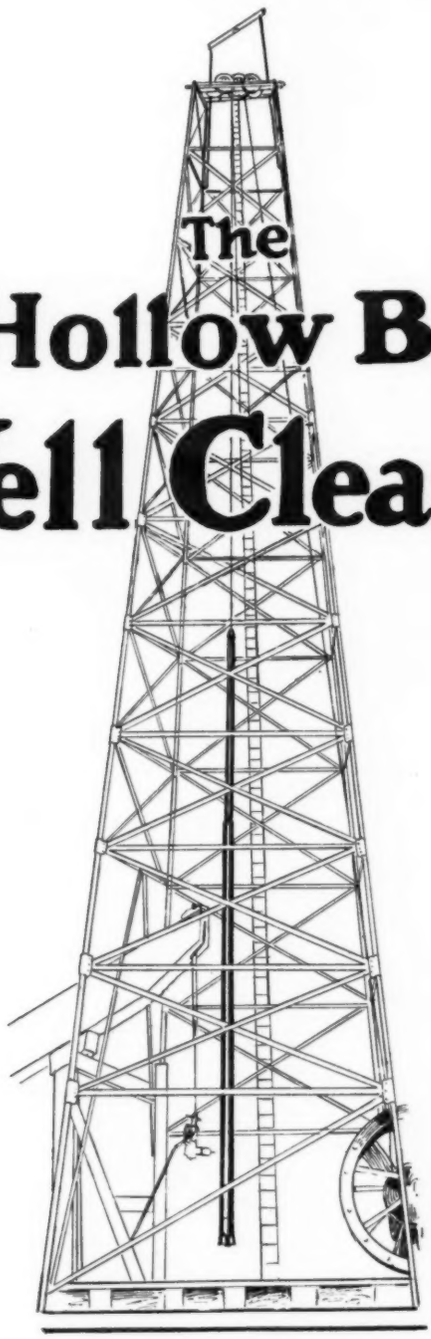
Contract Let for Texas-Denver Gas Line

Denver.—Public Service Company of Colorado has signed contracts with Prairie Oil & Gas Company and Standard Oil Company of New Jersey for the laying of a 400-mile natural gas line from the Texas Panhandle field to Denver, to be completed by July. The line will supply Denver, Colorado Springs, Pueblo, Trinidad and other Colorado and Texas towns. A 20-inch pipe will be used and cost of the line is put at $22,000,000.

STEARNS-ROGER

The
"Hollow Bit"
Well Cleaner

Tool is double extra heavy throughout and is sometimes used with a sinker bar. (It can be used on the sand line.)



Star Bit

Used in cleaning caves, Bridged Holes, Hard Sand and after shots

Prong Bit

Used in cleaning mud and paraffin from the wells

Write for Bulletin 2652

Stearns-Roger

THE STEARNS-ROGER MFG. CO. DENVER COLORADO

Seismograph Dome Discoveries Come With Rush

(*Continued from page 25*)

dome due to its proximity to Lutcher townsite, and lies 22 miles southeast of Napoleonville dome, and about nine miles west and slightly south of Thibodaux.

Bayou Blue dome was located by the Union Sulphur Company in Iberville Parish, sections 72 and 75, 9 south, ranges 10 and 11 east. This dome is about seven miles west of Grassette dome.

Almost due north about nine miles from Bayou Blue the Union Sulphur Company and Standard of Louisiana located the Bayou Henry dome, Iberville Parish, section 61, 8 south, 10 east.

Bayou De Glaise dome was located by Union Sulphur Company and Standard of Louisiana about nine miles northwest of Bayou Henry dome. It is located on the east bank of the Atchafalaya River in Iberville Parish, parts of sections 78, 79, 85 and 86, in township 8 south, range 8 east. Its location is approximately six miles northwest of Bayou Bullion dome, the presence of which has been known for several years.

The eighth dome included in the discoveries of the past few weeks is White Castle dome, outlined by Roxana Petroleum Corporation at a point seven miles west and slightly south of the town of White Castle. It is located in section 8, 11 south, 12 east, Iberville Parish.

Start Test

Thus far the only activity started around any of the new discoveries is a location made by the Gulf at Sorento dome. Its United Land Company 1 was rigged up late last week, located in the southwest corner of section 14, township 10 south, range 4 east. A point of interest about Sorento dome is the drilling there in 1925 of two tests by the Empire. A wildcat was drilled to 4000 feet and abandoned as a failure. The only show of probable value was encountered at 1200 feet, but was not tested in this hole. After the deep hole was given up the derrick was skidded over a short distance and a second hole was drilled to 1200 feet and tested dry. These locations were in the southeast corner of the northeast quarter of section 22.

The relative position of the newly discovered domes to each other and to former discoveries can be easily determined on the accompanying illustration.

Simultaneously with the location of eight new coastal salt domes in Southern Louisiana is the increased value of 12 interior domes in the northern part of the state as a result of Humble Oil & Refining Company's major strike around a like dome in the central eastern part of Texas, March 21. Prior to Humble's opening of production off the edge of Boggy Creek dome, northeastern Cherokee County, little value had been attributed to the presence of interior salt domes. Now these domes are considered probable sources of future production, and land surrounding them has in the past few weeks been leasing at fancy prices, together with a growing interest in royalties in the vicinity of the domes.

The interior salt dome region of Louisiana begins in the southern portion of Webster Parish and runs in a southeasterly trend, paralleling the oil and gas line along the western side of the State, and extends to the southern edge of Winn Parish. Vacherie dome, bordering on the line of Webster and Bienville Parish, is about 15 miles southeast of Bistineau dome in Webster Parish. East of the latter is Arcadia dome, on the eastern boundary of Bienville Parish, and in the southern edge of this parish are Rayburn, Prothero and King's domes. In Winn Parish to the southeast are Price's, Drake's, Winfield, Cedar and Coochie Brake domes, while to the west in Natchitoches Parish is Clear Lake dome. Thus far there has been little search for oil around these domes, but the significance of the recent strike around a dome of the same nature at Boggy Creek is expected to give rise to considerable wildcatting in the future around them.

Roxana Takes Out Big Group Insurance

New York—Roxana Petroleum Corporation has put in operation an $11,000,000 co-operative group insurance program with health and accident benefit, which includes protection for 9000 employes where Roxana operates. All employes with three months service to their credit are entitled to the insurance. A visiting nurse service is also included in the program where service has been established. The Metropolitan Life Insurance Company is carrying the risk of the co-operative policy.

Spindle Top Production Declines Sharply

Houston.—Spindle Top field, including the deep sand area, and slightly more than 1100 barrels of shallow cap rock production, dropped to 47,900 barrels early this week. The great decrease from 60,000 barrels of 10 days ago results from few completions within the past week and a sharp decline in recent flush wells. Magnolia's Fee 2, which extended the deep sand territory southward late in February with 2660 barrels initial from 5100 feet, has declined to 1250 barrels. Turnbow Oil Company's Weed-Favorite 1, which made 4800 barrels from 5016 feet two weeks ago, is now flowing 250 barrels of fluid of which 50 per cent is water and b. s.

The inside acreage of the Gulf and Rio Bravo is well drilled up, and Yount-Lee Oil Company has protected its outside acreage to the point now of being able to slow up drilling to some extent. The deep drilling on the south near Magnolia's producer has failed to show results early this week as more than 60 days is usually required to complete a well at this depth in the field.

More than 30 wells were drilling and working over this week, including four semi-wildcats drilling for probable extension production on three sides of the dome.

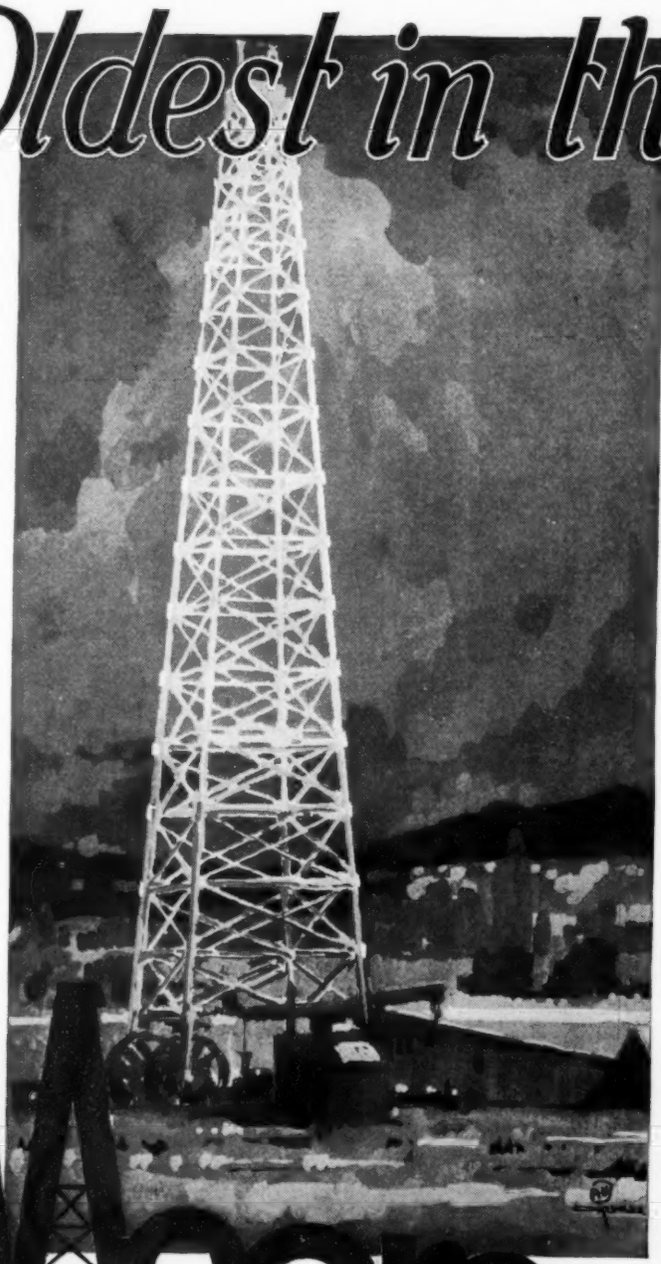
Texas Operators Curtail Drilling Program

Houston—An appreciable shutdown of drilling within the next month in the proven territory of Texas fields is indicated by action being taken by a number of leading operating companies. A poilcy of drilling not for the sake of oil recovery, but only to fulfill lease obligations and to offset competitive production has been voiced generally within the past week, and although a noticeable decline has thus far been little apparent, due to the fact that many of the operations now under way had started prior to the heavy price cutting.

At a meeting of the division superintendents of the Humble in Houston last week the decision was made to cut drilling activity practically in half as compared with the amount of the company's activity two months ago. At that time the Humble was running 90 rigs. Since then this number has been cut to about 79, and within the next 30 days the company plans to be running only about 45 rigs, cutting out operations as the wells now drilling are completed. The shutdown will be effected nearly altogether in proven fields where drilling obligations are not pressing.

Gulf Production Company plans to cut drilling in old proven areas to approximately half, much of which has already been done. At the unproven salt domes, where Gulf controls all of the probable productive acreage, drilling will continue, according to the company's policy, inasmuch as ordinarily several years are required to develop production around the domes. Gulf's cut in operations will be on rigs running in areas of developed production, and after wells now drilling are completed further drilling will be to carry out lease obligations or to offset production on competitive acreage. An example of shutdown already effected by the Gulf is seen in the Coastal territory, where the number of active rigs has been decreased from 60 to less than 50 within the past two months. This shutdown will be continued as present drilling wells are completed.

Oldest in the Field



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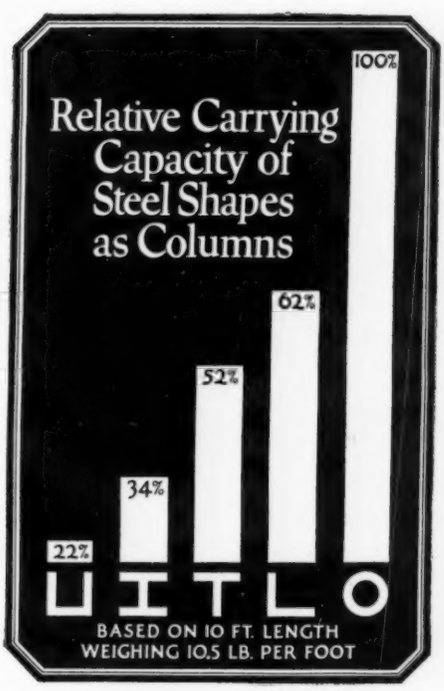

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Say you saw it in The OIL WEEKLY

Humble Gets 35 Barrels in Austin County Well

Houston.—Humble Oil & Refining Company obtained its first oil production in the Raccoon Bend area April 7 when Thompson 2 flowed 35 barrels initial from 1007 feet with a large quantity of gas. The crude tested 17.5 Baume gravity, of high viscosity and dark black in color. Failure of the well to make more oil is attributed to the heavy grade of the crude.

Five other rigs are running at Raccoon Bend and two locations have been made. Two of these rigs are being run with gas from the Walton 1 discovery well and the other three are driven by gasoline motors.

To Drill Structure Near Butte, Montana

Butte, Mont.—A syndicate of local men will drill a test on the Crowley structure, near here, after leasing 20,000 acres of land lying on the anticline. The syndicate was largely influenced by the presence of shale beds nearby and the favorable reports made by geologists.

Who Produces the Oil in West Texas

San Angelo, Texas.—Daily average production in the 14 counties producing oil in the West Texas district for the week ending April 6 is listed below by fields, with the number of producing wells included:

Crane County

	No. Producing Wells	Daily Average Prod.
Church & Fields—		
Humble Oil & Ref. Co.	2	5,610
Tidal Oil Co. et al	5	3.785
Eastland Oil Co. et al	1	3,510
Simms & Atlantic	4	2,500
Gulf Production Co.	2	2,350
Cromwell & Pickrell	1	1,100
Magnolia Pet. Co. et al	11	565
Prairie Oil & Gas Co.	6	535
Geo. Church & Fields	1	120
Stidham & Thrasher	1	15
Totals	34	*20,090
Gulf-McElroy—		
Gulf Production Co.	15	11,395
Marland-Hughes—		
Marland Oil Co. et al	18	1,245
The Texas Company	10	370
McMan Oil & Gas Co.	1	80
Independent Oil & Gas Co.	1	10
Totals	30	1,705
Totals Crane County	79	33,190

Reagan County

Big Lake Oil Company	101	19,105
Texon Oil & Land Co.	72	7,965
Totals	173	27,070

Mitchell County

The California Co.	79	2,555
Magnolia Petroleum Co.	20	680
Atlantic Oil Prod. Co.	8	525
Eastland Oil Co. et al	8	285
Tidal Oil Company	2	25
Fred Carey et al	1	20
Totals	118	4,090

Pecos County

Mid-Kansas & Transcontinental	4	*3,615

Jones County

Phillips Petroleum Co.	7	1,250
Marland Oil Co.	3	835
Mid-West Explo. Co.	4	580
Atlantic Oil Prod. Co.	1	75
Totals	15	2,740

Upton County

Roxana Pet. Corp.	28	4,700
Marland Oil Company	78	3,985
Dixie Oil Company	27	3,695
TP Coal & Oil Company	12	3,415
Independent O. & G. Co.	24	1,510
Prairie O. & G. Co.	4	980
Gulf Production Co.	11	415
Humble Oil & Ref. Co.	7	395
Sun Oil Company	10	395
The Texas Company	16	420
Amerada Pet. Corp.	5	255
Simms Oil Company	3	225
Wentz Oil Corporation	3	195
Republic Prod. Co.	5	110
Bryant & Atlantic Oil Prod.	1	40
McMan Oil & Gas Co.	1	7
Totals	235	20,742

Howard County

Marland Oil Company	19	1,440
Magnolia Petroleum Co.	20	840
Lockhart & Carey	4	165
Reeves & Apperman	1	120
Bristow & Merrick	1	95
Gulf Production Co.	2	95
Comet Petroleum Co.	1	60
Humble Oil & Ref. Co.	2	60
Dixie Oil Company	1	35
Totals	51	2,910

Crockett County

Humble & Marland Oil Co.	11	780
J. K. Hughes Dev. Co.	4	240
Carl Cromwell	5	120
Gulf Prod. Co.	6	115
Republic Prod. Co.	2	105
Roxana Pet. Corp.	1	15
Totals	29	1,375

Winkler County

Gulf Production Co.	1	450
Southern Crude Oil Purchasing Co...	1	365
Totals	2	*815

Scurry County

Northwest Company	4	30

Ector County

J. S. Cosden et al	1	25

Loving County

Lockhart & Company	2	30

Glasscock County

Marland & Texon O. & L. Co.	1	6
Marland & Texon O. & L. Co.	1	65

Garza County

Emerald Oil Company	1	8
Grand total 14 counties	715	96,705

*Production partially pinched.

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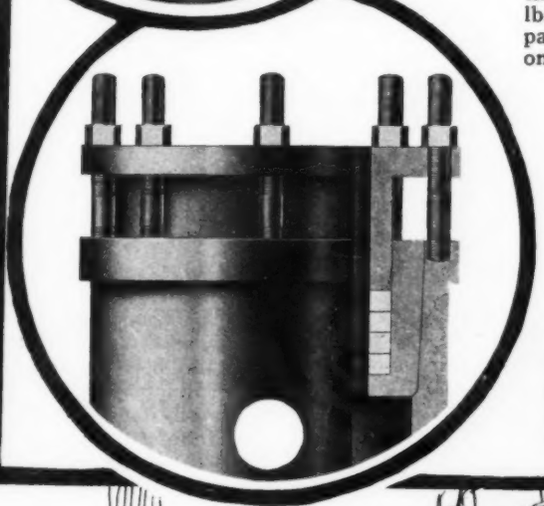

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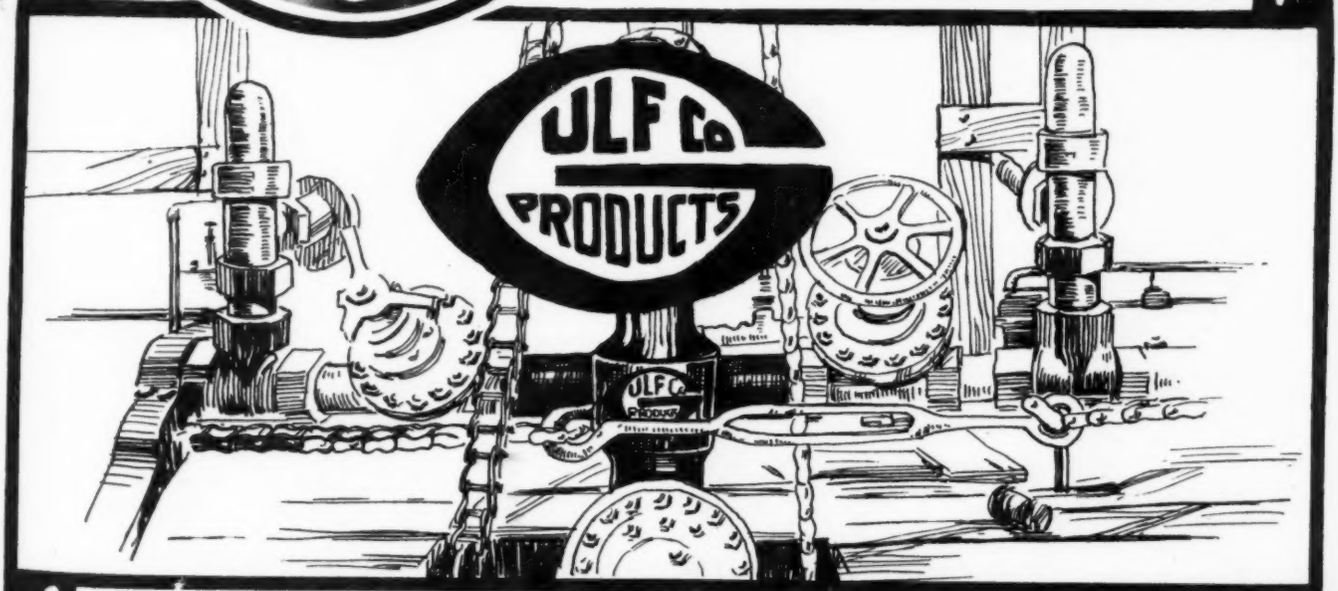

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Geology of the Panuco District

By CHARLES LAURENCE BAKER

WATER ANALYSES FROM PANUCO AND TOPILA WELLS

A. In Grams Per Liter.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
Sodium	6.974	9.2?8	9.605	13.118	13.039	16.082	17.05	17.94	6.0445	12.224	
Potassium	1.6905	1.586	1.578	3.106	3.062	4.085	3.44	3.935	1.1455	9.283	
Ammonium	.0832	.0844	.0992	.1132	.1132	.1288		.1216	.0328		
Calcium	1.2395	.957	2.364	1.529	1.493	1.8	.74	3.179	.5785	1.024	
Magnesium	.8995	.750	1.172	1.286	1.299	1.587	.66	2.704	.3	.593	
Sulphate	.5485	.444	.437	.386	.403	.653	.37	.115	.1665	.396	
Chloride	16.912	18.370	22.952	28.496	28.352	35.174	29.80	43.418	11.156	27.269	
Bicarbonate	.2375	1.899	1.394	1.839	1.780	1.958	9.43	.771	1.854	2.756	
Hydrogen Sulphate	.0442	.0362	.0306	.0644	.0524	.0498		.0374	.0362		
Silica	.095	.150	.160	.17	.13	.16		.25	.045		
Iron and Alumina	.04	.09	.06	.06	.1	.1		.05	.02		
Total Mineral Content	28.7639	33.5946	39.8948	49.7676	49.8166	61.7776	61.49	72.021	21.379	53.545	
Potassium Chloride	0.32%	0.30%	0.30%	0.59%	0.58%	0.78%	0.48%	0.75%	0.22%	1.37%	
B. Percentage Mineral Content											
Chloride	54.5412	52.2626	57.5407		56.9025	56.938	48.5144	60.2859	52.1766	50.927	55.292
Sulphate	1.7689	1.2632	1.0955		.8088	1.057	.6024	0.1597	.7764	0.739	7.692
Bicarbonate	0.7659	5.4026	3.4947		3.5725	2.1583	15.352	1.0705	8.6712	5.147	0.207
Sodium	22.4911	26.2536	24.0797		26.1552	26.0319	27.6574	24.9097	28.2678	22.829	30.593
Potassium	5.4518	4.5122	3.941		6.1454	6.6123	5.6003	5.4637	5.3552	17.337	1.106
Calcium	3.9974	2.7227	5.9265		2.9964	2.9136	1.2047	4.414	2.7033	1.902	1.197
Magnesium	2.9009	2.1337	2.9557		2.607	2.5589	1.0748	3.0602	1.4031	1.107	3.725
Ammonium	0.2683	0.2401	0.2487		.2272	.0466		.1688	.1534		

1. 416 Ingenio, from 125 bel ow top of Washita, perhaps diluted with fresh drilling water.

2. 439 Ingenio, from 287 feet below top of Washita.

3. 432 Ingenio, from 332 feet below top of Washita.

4. 217 Halcon (A) from 65 feet below top of Washita.

5. 217 Halcon (B) from 65 feet below top of Washita.

6. 402 Ingenio, from Nio brara.

7. 411 Ingenio, from 180 feet (?) below top of Washita.

8. 509 Tamboyoche, Topila, from 128 feet below top ot Washita.

9. M-23, Potrero del Zacate, from 85 feet below top of Washita diluted with pond water used in drilling.

10. Corona Pazzi 5, San Manuel, from depth of 1805 feet.

11. Dittmar's average of 77 analyses of ocean water from many localities. Challenger Rept. Physics and Chemistry, Vol. 1, 1884, Page 203. Salinity 3.301 to 3.737 per cent. Analyses 1 to 6 inclusive and 8 and 9 made by L. A. Penn, Chemist, Pacific and Associated Oil Companies, San Francisco, California.

THE geology of the Panuco district of Mexico has for sometime offered a most interesting subject for study and research but before the preparation of the accompanying article very little authoritative data has been published on this area.

Dr. Baker's discussion is completand comprehensive and will form a valuable adjunct to any geological records on Mexico. The length of the article requires more space than was possible to give in one issue so it has been divided into several sections, of which this is the fourth and last.

The article will also be published in the Bulletin of The American Association of Petroleum Geologists.

Origin of Water

The total salinity of the waters analyzed varies from 2.8 to 7.2 per cent. It is apparent from this variation that the waters probably have different sources and that there is no mingling of the waters even in nearby fracture zones. The highest concentrated water in the Ingenio lease comes from the shallowest horizon, but the well is situated in a greatly fractured zone and this water may really be coming from a deeper source than the other waters.

There is an alternative explanation. When pressure is decreased by the escape of gas, expansion lowers the temperature, especially of carbon dioxide, and we get the condensation of ice around the head of the well even under a blazing tropic sun. Gas under low pressure will absorb more water than when under high pressure and it is possible that this absorption concentrates the perecentages of mineral matter left in the water. If so, one would expect wells with large volume of gas to have waters of higher salinity.

The high percentage of potassium is the most remarkable feature. There are at least three sources for the potassium: (1) from acidic holocrystalline rocks, (2) from potash-bearing dessication sediments associated with the possibly occurring pro-Kimmeridge gypsum beds known in the Cordillera or other saline residues of older date, (3) from leaching of the acidic tuffs of the Upper Cretaceous.

Compared with sea water there has been addition of potassium, calcium and bicarbonate radicles and subtraction of the sulphate and magnesium radicles. The addition of calcium and bicarbonate is usual in waters in limestone. Waters associated with asphaltic oils are usually poor in sulphate, which is taken out of solution, reduced and added to the oil as sulphur. Moreover, the sulphates of these waters, by addition of organic matter, can be partly or entirely reduced to sulphides, and carbonic acid, acting upon the latter, may expel hydrogen sulphide and produce carbonates. Magnesium has probably been removed in the formation of dolomite, which is known only in a core sample 20 feet below the top of the Niobrara in Ita Mex Well 20, La Mula, Topila, but probably occurs more extensively.

The water migrates laterally only in the fracture zones; the strata between the fractures are impervious. Water, like the oil, does not occur at any definite stratigraphic horizon, hence it is simpler to class virtually all of it as bottom water. In a few instances, water has been cased off and oil obtained from a deeper level. Perhaps the reason this has been done but rarely, is the general custom of ceasing drilling whenever water is encountered, no effort being made to shut it out and drill deeper. The fact that either oil or water will be encountered if drilling is continued very likely indicates fracturing is more abundant in the lower levels of the limestone. Whether there are continuous oil or water horizons in the Lower Cretaceous or older rocks is something which has never been determined, no real effort to find out having ever been made.

It appears that there is a greater yield of oil and water for a period after the rainy season than during the rest of the year. All the water appears to be under sufficiently great artesian pressure to cause it to flow at the surface although the gas, which outlasts oil in profitable quantities, is an important agency in causing both oil and water to flow.

The indications are that the water is of an original connate origin modified by the factors already considered and perhaps by some others. It is probable but not certain that the water is under hydro-

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static pressure of artesian conditions, the impervious Pierre and Velasco marls preventing escape of water, gas and oil upwards to the surface. So far as known the sediments from Upper Jurassic to base of the Pierre inclusive, are entirely composed of limestone and shale but pre-Jurassic sediments if present possibly have a large proportion of sandstones and conglomerates. Water from the pre-Jurassic terranes may rise through fractures into the Cretaceous limestones and the fractures, cavities, and caverns may be practically continuous in the Cretaceous limestones from their outcrops in the Cordillera and Sierra de Tamaulipas to the site of the Pancuo field.

There is, however, a very perplexing variation in the closed pressures of Panuco wells. Reduced to a common basis maximum closed pressures are ten times as great as the minimum. The pressures vary greatly in different wells in the same fracture zone. There is a complexity of factors involved in accounting for the differences. The first and most obvious explanation is differences in volume and pressure of gas, but this assumes that there is not free movement of gas throughout the field. This, is, of course, proven by the results of drilling. Unfortunately, we do not have records of closed pressures during the early life of the field before salt water made its appearance. If gas is constantly being generated by decomposition of the limestone the development of the field has disturbed the original condition of at least quasi-equilibrium and given rise to irregularities in the rate of formation of gas. In vertical columns comprising the distance between the casing-head and the bottom of the fracture penetrated by the well there are at the present stage of development varying volumes of gas, oil and water as well as some relatively minor variations in temperature. Temperature is also decreased upon relief of pressure which increase the resistance of the oil in the column which serves to decrease the pressure at the casing-head. Since all the wells in a specific area are never entirely closed in simultaneously for a space of time sufficient to bring about equilibrium variations in pressure are apt to be the rule.

Salt Water first appeared in the Panuco field in the late autumn of 1919 at the edge of the Ingenio-Peralta-Zurita area in a well originally drilled into salt water at a depth greater than any producing well in that area at the time. It then spread in a few months through this greatly fractured area of greatest as well as oldest production, appearing successively in wells of lesser depths. The water encroachment was so uniform in rising to successively higher levels that early in 1920 it was the general view that the life of the field was then limited to a very short time. Yet wells in this area are still producing oil and one of them is Zurita 3 which has produced more oil than any other well of the entire Panuco field. That there has been no general and continuous rise in water level throughout the field upon continued withdrawal of oil has been amply demonstrated by subsequent history. In fact, producing wells have been brought in continuously since in the closely adjacent areas and many of them have encountered production entirely free from water at depths considerably greater than the present water level in the area originally showing salt water.

History of development to date has demonstrated such a condition as the following. Two fracture zones not greatly distant have been discovered and largely depleted of oil, salt water rising in the fractures as oil has been drawn off. Later a fracture situated between the two has been developed and yielded at first pure oil from depths greater than the apparent original water level in one or both adjoining fractures before these fractures were drilled. In other words, oil is apparently trapped in some of the fractures by closing of the fractures above and at the sides to such a degree that although water level has risen to high levels in adjoining fractures it has remained at a far greater depth in the intermediate fracture.

It is, therefore, demonstrated: (1) there has been no continuous or uniform rise in water level such as takes place in fields of continuous sand horizons; (2) that there is not in general free connection between fractures within the zone in which oil is now being produced. Supporting evidence is afforded by the wide variation in mineral content of the waters and in variations in closed pressures although both of these may be partially explained in other ways.

This is a most important fact as respects the future productive possibilities of the field. Very little of it has yet been intensively developed and an average per acre production of less than 3000 barrels to the present is judged to be very much less than the ultimate probable yield.

In fact, in this area of irregular and widely prevalent fracturing it is virtually impossible to ever drain all the possible fracture zones. It would appear also that if the greater part of the oil is derived from the Upper Jurassic and has subsequently migrated in an upward direction profitable oil may be expected at any depth between the Upper Jurassic source rock and the bottom of the generally impervious cap of the Pierre marl. There may have been originally much freer connection between fractures both horizontally and vertically, then filling with oil, and subsequent closure of many of the fractures by various causes already noted. At least, it would appear that such was the case in order to explain some of the puzzling phenomena encountered in this field.

In general much oil can be produced from Panuco wells by a judicial control of flowing pressure after salt water makes its appearance. For instance, one of the oldest wells at Topila has produced continuously for fifteen years although salt water long since appeared in the well. The process of "stripping" Panuco wells for long periods is rendered possible by their continuously flowing.

The production from the South fields "Golden Lane" is also from limestone but the South Fields main producing limestone is a quite different facies although of the same age as the Washita limestone of Panuco. The South Fields limestone is extremely porous, cavernous, and disintegrated and since the anticline there is more steeply folded and the anticlinal accumulation of the oil much more prevalent than in Panuco it has been possible to drain the South Fields of probably a greater percentage of their total content of oil than has yet been possible elsewhere, at least in North America.

Drilling and Production Methods

Panuco wells have been drilled with standard or rotary rigs or a combination of the two. Only a very few wells have been continuously cored through the Colorado Group with the diamond drill.

The cheapest and most rapid method of drilling to the base of the Pierre is with the fishtail bit on either a rotary or diamond rig. Since relatively little profitable production is derived from the Pierre and higher strata there is no great objection from a production standpoint to using the fishtail to the top of the Colorado Group. Below the top of the Colorado Group it is very poor policy to use the rotary although the rotary is so used by some producers, a change being made to rock bit at a depth a short distance above the top of the Niobrara. Standard tools are cheaper than rotary in the Colorado Group and Washita and in these formations have the following advantages over rotary:

(1) There is no column of fluid in the hole to inhibit or totally obscure oil or gas showings.

(2) The Standard tools have a tendency to somewhat shatter the rock beyond the walls of the hole and such shattering markedly increases chances of profitable production.

(3) The standard gives much better formation samples.

The main disadvantages of the standard tools is when small quantities of the heavy, thick, tarry oil is seeping into the hole the efficiency of the tools is more or less lowered. If heavier tools were used this would not be such a serious disadvantage.

If the rotary is used for drilling below the top of the Niobrara, water as clear as possible should be used for fluid, except when it is necessary to seal off heavy gas which should be done by the use of barite or iron oxide. Should the bit penetrate a cavity yielding large production the oil will show its presence even when a heavy drilling mud is used. But lighter shows, many of which have proved to be profitable, will many times show very poorly, if at all, while drilling with the rotary and it is always advisable to bail the hole and test such showings when they appear, and it is probably in most cases very good practice to test by bailing whenever the drilling samples show oil-stained rock, even if there is no oil showing in the circulating fluid.

Undoubtedly the cheapest method of drilling these fairly shallow wells is to use portable rotary to the top of the Niobrara and portable standard for the re-

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mainder, utilizing the pressure of the gas for power.

It is the writer's conviction that the future of Panuco depends more upon a radical change in the present antiquated drilling methods than upon any other single factor. Since only about one-fortieth of the conservatively estimated total oil content of the upper two and less important possible oil horizons of the field has yet been won, and fourteen-fifteenths of the wells now being drilled are failures, and certainly less than a half dozen of the operating companies have to date made a profit, it is quite apparent that there is likely something fundamentally wrong with the methods being used. The suggestion is advanced that continuous core drilling and "shooting" of wells are worthy of a far more thorough test than they have ever had in this field.

Present methods of diamond drilling are not suitable for drilling wells for production in the Panuco field since the bore hole is of too small diameter. It is true that a bore hole four inches in diameter will deliver a sufficient quantity of oil but in the limestone the larger the diameter of bore the greater the chance of finding fractures and the larger the amount of oil yielded by the fracture.

There is another fundamental reason for continuously coring the limestone with a large diameter hole. That reason is the very great desirability of "shooting" most of the wells. Cores afford precise information where both oil saturation and fracturing occurs. They will show fracturing which may possibly be made to yield production in many localities where such fracturing will never be found by other methods of drilling. Such fractures or saturated zones can be "shot" with certainly a very large chance of procuring production. In perhaps the majority of cases it will be advisable to "shoot" the same interval a number of times, always using freshly-mixed nitroglycerine (this is difficult to do in Mexico) breaking down the wall with jack squib and thoroughly cleaning out after each shot, successively increasing the charge used and if necessary finishing with an extremely heavy shot.

There have been very numerous wells drilled very near important fractures which have not yielded profitable production but which intelligently "shot" would almost certainly have produced. Relatively few wells have been "shot" in Panuco and those "shot" have not been markedly successful. No one knows any definite horizon where production is expected and hence is not on the watch for oil saturated zones, which at the best are very definitely indicated by the rotary drill although standard samples if intelligently watched during the progress of drilling present much better data. The only way in which the smaller fractures, which may indicate proximity to larger ones, can be detected in either standard or rotary drilling is when they happen to be lined with crystalline calcite. The calcite is largely ground to powder during rotary drilling and the evidence it affords is largely obscured or even destroyed. The cores which have already been taken show the presence of another class of smaller fractures which do not contain vein fillings. Such fractures will never be known when penetrated by either standard or rotary drill. It is really unaccountable how the prejudice against shooting has developed and persisted at Panuco since shooting is well nigh universal in other limestone and hard consolidated rock fields.

Diamond core drilling and proper "shooting" will increase greatly chances of success in at least three general cases prevalent in the Panuco field:

(1) When a well is situated close to a fracture either known or reasonably predictable from structural data.

(2) There is possibility of fractures of small amounts of vertical displacement or joints which cannot be predicted from structural evidence known from the nearest wells, since the Panuco field, is, with few exceptions, not by any means closely drilled. If fractures already drained of oil are sub-parallel and not connected one with the other through cross fracturing, other oil-bearing fractures may exist in territory between those already developed and drained of oil.

(3) In some cases fractures have only been penetrated by the drill at relatively deep levels, or if at shallower depths, the shallower wells are too broadly spaced to have drained all the profitable oil from the higher parts of the fractures. In some instances the actual strike of the fault has never been determined, because it is naturally better practice when it is ascertained that two wells are producing from the same fault to locate further wells along a straight line either connecting the wells already drilled or continuing their straight line direction. That the majority of fractures are not absolutely vertical is suspected because producing wells situated on straight lines derive production from different depths. This deduction is subject to the possibility that parts of the fracture are imperviously sealed by gouge or vein matter. The actual dip and direction of dip of a non-vertical fracture plane known from a single line of wells cannot be determined from the available data. In such cases drilling of shallower wells along the line already developed and "shooting" them will give increased chance of producing from the upper levels of the fractures. Core drilling will aid, of course, in giving evidence of proximity to fractures. A seven to eight inch diameter hole should be drilled for production by diamond drilling. This can be done by attaching ordinary rotary drill stem, preferably flush joint, to the present heavier diamond drilling machines by the use of a nipple placed beneath the floor of the rig or by constructing new types of diamond drills capable of handling larger diameter drill stem.

The fishtail bit can be used for drilling with the diamond machine until the top of the Niobrara is reached and the cost to that depth will be only slightly greater than with the rotary drilling machine. If the draw works of the diamond drilling machine are further improved so they will operate as rapidly as those of the rotary there should be no difference in cost. Below the top of the Niobrara an average rate of 40 feet per 24 hours can probably be maintained with the diamond drill in the comparatively shallow Panuco area. This will be cheaper than standard drilling but will cost about twice as much as rotary drilling. The hard cherty limestone encountered below the top of the Washita should be drilled cheaper by diamond than by either rotary or standard, although the irregularly distributed chert increases considerably the diamond cost.

The usual practice is to cement eight-inch casing near the top of the Niobrara and to proceed with open hole beneath. Few producing well are tubed although when a large producer is brought in with the rotary the drill stem is often left in the hole and this partially inhibits the escape of gas; nearly all wells are partially choked in while producing and the flow opening is made gradually smaller as the oil shows emulsion and salt water. The choker is used not so much to inhibit escape of gas as it is to prevent premature drawing of emulsion and salt water into the well, since very few wells ever cease flowing. Generally the pressure increases when a large quantity of salt water makes its appearance, mainly because the resistance to flow (viscosity) of water is much less than that of the oil and the temperature generally rises upon appearance of water. The usual practice of making a well flow its own oil to a distant pipe line or pumping station is probably detrimental to the life of the well because variations in temperature induce oscillations in pressure generating agitation which tends to prematurely draw in salt water or emulsion.

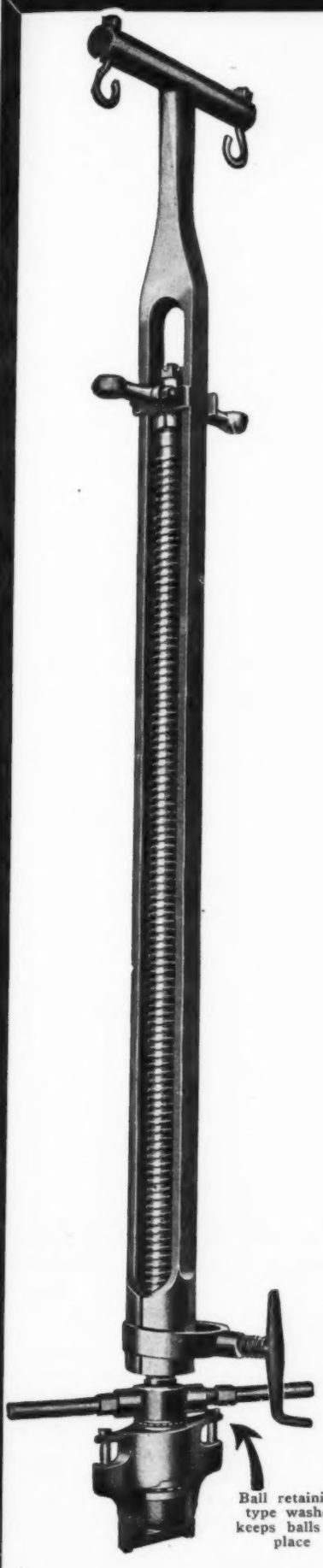
There has been to date very little utilization of the pressure of the abundant supply of gas in drilling, pumping and other power purposes. If the gas is separated from the oil and then used for pumping it from the wells the rate of yield can be safely increased and the flowing pressure of wells kept more uniform. There is apparently enough gas still in the field for nearly all drilling, transportation and power purposes, although some oil must be burned in heating that passing through pipe lines.

It may be thought that the above criticisms are unduly unfavorable to the average producer, yet it is a fact that oil has been continuously produced in Mexico during a period of fifteen years under conditions far more difficult than in any other country and those familiar with the situation know this has been no mean achievement.

Conclusion

Geology would not be much of a sciene if it did not make constant progress. Oil, like gold, is widely distributed in the rocks and both have what may be termed the more normal modes of occurrence and in addition a number of sporadic modes of occurrence. The latter are apt to be more instructive than the former. Panuco, with its unusual conditions teaches some valuable lessons.

Active seepages of oil are known, both in highly deformed rocks and those subject to considerable contact-metamorphism, in the Mexican States of Durango, Coahuila and Tamualipas and rocks both



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Say you saw it in The OIL WEEKLY

dynamically and contact-metamorphosed of the Mexican West Coast States exhibit oil concentration and seepages. These occurrences cast very grave doubt upon the validity of the carbon ration hypothesis. Metamorphism produced through folding and igneous intrusion appears likely to in some instances change the original nature of the oil, somewhat analogous to the change from lignite or bituminous coal to anthracite or graphite under similar conditions, but unless sufficient oxygen is present to bring about actual combustion of the oil or there is free outlet for its escape it will not be destroyed. The writer has found vesicles in basalt filled with oil in the State of Santa Catharina, South Brazil. The basalt is there absolutely fresh and solid without even the slightest cracks connecting the vesicles with the outside, hence it is probable that the oil was present in the molten magma and was not destroyed by igneous processes. There are said to be similar occurrences in the Southern field of the Tampico area. Vesicles in basaltic sills at Panuco are filled with oil. Another fundamental consideration not taken into account by the carbon ratio hypothesis is increase in metamorphism induced by the greater pressure at greater depths. Also in cases where a large thickness of rocks has been removed since the time of oil formation and accumulation the pressure is now considerably less.

Panuco teaches another lesson. Wherever a dense limestone may be oil-bearing, either in Mexico, the Trenton field of Ohio-Indiana, the "Mississippi Lime" and older formations of the Mid-Continent, the Pennsylvanian and Permian limestones of the United States Southwest, or in Persia or Egypt or anywhere else anticlinal structure is not absolutely essential for concentration of oil in profitable quantities. All such limestones have fractures or more or less irregular open spaces of other modes or origin. If oil source rocks occur either above or below such limestone, regardless of the attitude of the strata, oil is apt to be concentrated in whatever cavities or crevices exist in the limestone and which have more or less free communication with the source rock.

Geologists Hold Monthly Meeting at Enid

Enid, Okla.—The monthly meeting and banquet of the Geological Society of Northwestern Oklahoma was held here April 9. Two talks followed the banquet, one by E. G. Carpenter of the Sinclair Oil & Gas Company on "Peculiarities of Decline Curves" and one by J. W. Kisling, Jr., of the Amerada Petroleum Corporation, on "Extension of Nemaha Mountains."

Move Tulsa Office

Tulsa, Okla.—The district offices here of the Bruce-Macbeth Engine Company that have been located at 420 Clinton building now are at 821 World building. J. B. Simler, district manager, is in charge. The home offices of the company are in Cleveland, Ohio.

Big Lake Gross Nearly Triples Capital

Pittsburgh, Pa.—A net profit of $11,627,010.39, before depreciation, depletion and income tax, was made during 1926 by the Big Lake Oil Company, according to the annual report to the board of directors by Levi Smith, president. The holdings of the company are confined to the Big Lake field, located in the Reagan County section of West Texas on land owned in fee by the University of Texas. Seventy-five per cent of the $4,000,000 capital stock of the Big Lake Oil Company is owned by the Plymouth Oil Company, and the remaining one-quarter is owned by the Texon Oil & Land Company.

The Big Lake Oil Company produced 7,148,987.04 barrel of crude during 1926 in the Big Lake field, making a total recovery of 12,812,016.16 barrels. A substantial gain in production over previous years was made in 1926, as indicated by a total production of 4,815,243.12 barrels in 1925; 844,108.21 barrel in 1924; and 3,677.79 barrels from November 15 to December 31, 1923. Total oil producing wells held in the field at the close of 1926 amounted to 97, including 56 drilled during the previous 12 months. The company spent $1,388,702.58 for drilling during 1926, with 16 wells in process of completion at the close of the year. The Big Lake Oil Company's natural gasoline plant is producing from five to six thousand gallons daily, and selling same on contract to the Republic Oil Company. Sales of natural gas during 1926 amounted to $83,592.08, while the expansion of this department's lines and other work cost $37,842.78, leaving a profit of $45,749.30.

Ten thousand barrels of the daily crude production of the Big Lake Oil Company is contracted for the life of the property by the Reagan County Purchasing Company at the average Mid-Continent gravity price covering grades of oil produced in the field, and a second contract covering a like amount of oil and similar price basis was made for one year with Humble Oil & Refining Company. This latter contract expires May 15, 1927.

Magnolia Field Men Hold Annual Meeting

Dallas, Texas.—The twelfth annual meeting of officials, department heads and superintendents of the Magnolia Petroleum Company, Magnolia Pipe Line Company and the Magnolia Gas Company was held here April 7 and 8 in the Magnolia building auditorium. Several hundred employes of the Magnolia organization in Oklahoma, Kansas, Arkansas, Louisiana and Texas were assembled for the meeting, and after the annual banquet held Friday evening at the Adolphus Hotel the visiting employes and department heads of the Dallas office boarded a special train to inspect the refineries, export terminals and other properties of the company at Beaumont. This trip to Beaumont was the first occasion that many members of the producing and pipe line departments have had to view the refining properties of the company. The party returned to Dallas from Beaumont Sunday morning.

Magnolia is the only major company in the Mid-Continent that assembles its department heads and superintendents annually, and has carried out the practice every spring for the past twelve years, despite the large growth of the company. According to Frank V. Faulkner, vice-president in charge of production, the annual gathering permits employes to become better acquainted with new ones and their coworkers, and to discuss problems pertaining to the company's operations, as well as to build up an earnest effort on the part of all employes to make the company succeed. A general meeting was held on the opening day of the gathering, with Faulkner and W. H. Francis, vice-president and general counsel, presiding, and various departments held individual meetings on the morning of the second day, while a general meeting marking the close of the business sessions Friday afternoon was presided over by W. C. Proctor.

Empire Will Try Air and Gas Lift in Panhandle

Tulsa.—Following its success with air and gas lift systems for flowing oil wells in the Seminole area the Empire Gas & Fuel Company contemplates the early installation of similar equipment in the Panhandle of Texas. The first of the equipment for the Panhandle district has been ordered and consists of two compressors which will be electrically driven by 75 horsepower motors and will be installed on the Empire's Weatherly lease at Borger.

Air and gas lift work has been progressing in the Panhandle with fair results both in increasing the flow by artificial stimulation and in securing production with lowered lifting costs. The Empire will experiment with the first two unit plant and if results are satisfactory a large installation will follow, which will be similar to the plant installed on the Empire-Lacey lease in the Seminole field.

Petroleum Technologists

Washington, D. C.—The Civil Service Commission announces that applications for positions as petroleum technologist (production and refining) salary $3800 per year, and associate petroleum technologist (producing or refining) with salary $3000 yearly, and assistant petroleum technologist (producing or refining) with salary of $2400 yearly, must be on file with the Civil Service Commission at Washington, D. C., not later than April 26. Competitors will not be required to report for examination but will be rated on their education, training and experience, and publications, reports, or thesis to be filed with the application. Application forms will be furnished upon request.

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United States Daily Average Production

Figures below are taken from the complete revised estimates of the AMERICAN PETROLEUM INSTITUTE except for the current week, which are advance estimates issued by the A. P. I. and are subject to revision;

Month—	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Ark.	Eastern States	Rocky Mountain	California	United States Ave.	Gross
January	449,370	100,130	260,180	90,290	43,990	181,190	101,000	102,300	621,300	1,946,980	60,356,380
February	450,037	101,937	245,989	91,550	45,090	169,676	99,000	98,412	605,250	1,909,637	53,469,836
March	454,762	103,300	260,262	92,712	48,787	164,312	97,625	102,325	604,500	1,929,562	59,816,422
April	467,175	101,825	263,612	88,812	50,562	169,824	100,875	106,675	600,000	1,947,387	58,421,610
May	463,750	105,690	277,700	94,550	58,150	175,430	105,700	112,300	602,720	1,995,990	61,875,690
June	456,450	107,637	302,187	89,912	60,412	167,887	106,250	112,925	606,925	2,013,187	60,395,610
July	456,920	110,320	336,600	114,760	57,460	161,870	104,700	108,520	613,940	2,062,470	63,936,570
August	465,137	111,600	381,550	161,237	56,787	157,375	108,350	110,737	609,725	2,162,662	67,042,522
September	465,387	113,037	402,212	175,512	56,575	154,037	110,125	105,825	598,100	2,180,862	65,425,860
October	497,120	114,720	439,190	170,350	58,200	149,810	109,500	99,060	611,600	2,259,850	70,055,350
November	551,225	115,425	475,987	176,425	56,575	144,100	111,125	93,537	641,325	2,365,475	70,964,250
December	561,012	118,950	483,450	181,263	55,137	139,250	110,375	87,650	659,925	2,396,112	71,279,472
January 1927	591,570	117,490	460,910	176,330	53,030	132,648	108,100	83,910	655,660	2,385,650	73,955,150
February, 1927	683,775	116,200	479,175	154,975	52,850	128,362	107,250	85,237	642,775	2,455,612	69,157,136
March	707,187	115,612	475,375	154,262	51,450	124,662	104,500	87,200	644,350	2,462,625	76,341,375
April 2	724,650	116,150	474,350	157,300	51,800	123,900	104,500	87,950	637,300	2,477,900	.....
April 9	725,100	117,000	474,850	156,750	52,250	122,400	106,000	82,750	641,200	2,478,300	.....
Increase	450	850	500	.....	450	.....	1,500	.....	3,900	400	.....
Decrease	.....	.....	.....	550	.....	1,500	.....	5,200	.....	.....	.....

TEXAS

(Outside Gulf Coast)

PANHANDLE DISTRICT

	April 9	April 2
Hutchinson County	101,500	104,100
Gray County	8,200	7,850
Carson County	8,550	7,700
Wheeler County	2,800	2,750
Others	50	50
Totals	121,100	122,450

NORTH TEXAS

Burkburnett	13,600	13,050
Electra	14,600	14,850
Iowa Park-KMA	4,150	4,200
Wilbarger	13,300	13,600
Archer County	30,100	30,250
Clay County (Petrolia	800	800
Baylor County	100	100
Montague and Cooke Cos.	13,500	13,750
Total	89,550	90,600

WEST CENTRAL TEXAS

Stephens County	9,600	9,900
Eastland-Desdemona	6,850	6,300
Brown County	32,600	35,550
Coleman County	1,600	1,650
Callahan County	4,750	5,000
Shackelford County	13,600	13,700
Young County	7,850	7,950
Throckmorton County	3,500	3,700
Jack County	550	600
Palo Pinto County	2,000	2,100
Jones County	2,900	3,000
Mitchell-Scurry Cos.	4,200	4,300
Howard County	2,250	2,200
Reagan County	27,850	26,300
Crane-Upton Counties	56,500	50,500
Crockett County	1,300	1,250
Pecos County	3,500	4,050
Others	3,200	3,100
Totals	184,600	181,150

EAST CENTRAL TEXAS

Mexia	11,400	11,600
Currie	650	650
Richland	950	950
Wortham	3,800	3,900
Corsicana-Powell	19,500	19,650
Nigger Creek	55,850	5,950
Totals	42,150	42,700

SOUTHWEST TEXAS

Luling	18,200	18,150
Lytton Springs	2,300	2,300
Somerset	1,250	1,200
Laredo District	15,000	15,100
Piedras Pintas	50	50
Others	650	650
Totals	37,450	37,450
T'ls Tex. (Outside Gulf Coast)	474,850	474,350

TEXAS GULF COAST

West Columbia	10,150	10,300
Damon Mound	950	950
Big Creek	4,300	4,150
Boiling	2,550	1,700
Blue Ridge	3,000	3,200
Pierce Junction	8,100	8,750
Humble	3,850	3,900
Goose Creek	8,950	7,750
South Liberty	3,700	3,800
Hull	16,350	16,000
Saratoga	1,200	1,200
Batson	1,400	1,400
Sour Lake	5,100	5,050
Spindle Top	56,500	60,900
Orange County	5,600	5,000
Others	6,200	6,500
Totals	137,900	140,550

OKLAHOMA

North Braman	6,700	6,100
South Braman	3,650	3,850
Blackwell	3,950	3,950
Hubbard	7,150	7,600
Thomas	1,450	1,550
Garber	17,250	17,400
Tonkawa	23,300	23,050
Burbank	44,150	45,550
Osage (outside Burbank)	35,200	35,250
Watchorn	2,600	2,750
Cushing	21,250	21,250
Yale Jennings	11,850	11,900
Davenport	3,600	3,550
Bristow Slick	27,250	27,250
North Okmulgee	17,250	17,250
Lyons Deaner	4,400	4,400
Stroud	1,400	1,450
Cromwell	13,450	13,400
Papoose	6,950	7,350
Wewoka	17,150	18,500
Duncan District	6,750	6,750
Earlsboro	38,800	36,350
Graham	8,300	8,400
Fox	1,800	1,800
Healdton	14,600	14,700
Seminole	295,500	294,700
Hewitt	9,900	9,900
Scholem Alechem	15,200	14,150
Others	64,300	64,500
Totals	725,100	724,650

CALIFORNIA

Seal Beach	30,700	26,300
Santa Fe Springs	44,500	44,500
Long Beach	92,000	92,000
Huntington Beach	75,000	75,000
Torrance	24,000	24,000
Dominguez	17,500	17,500
Rosecrans	11,500	10,500
Inglewood	37,500	37,500
Midway-Sunset	89,000	89,000
Ventura Avenue	51,800	53,300
Others	167,700	167,700
Totals	641,200	637,300

KANSAS

Florence-Covert	1,900	1,900
Peabody-Ebling	3,850	3,850
Eldorado-Towanda	13,250	13,250
Augusta-Fox Bush	4,600	4,600
Rainbow Bend	2,450	2,450
Russell	3,200	3,200
Greenwood County	41,100	41,200
Churchill	17,450	16,500
Others	29,200	29,200
Totals	117,000	116,150

LOUISIANA

	April 9	April 2
Homer	5,250	5,300
Haynesville	7,900	7,900
Caddo Light	9,800	10,300
Caddo Heavy	5,350	4,700
DeSoto-Red River	4,250	4,250
Elm Grove	650	650
Bellevue	1,650	1,600
Cotton Valley	6,100	6,100
Urania	11,300	11,000
Total	52,250	51,800

LOUISIANA GULF COAST

Vinton	5,950	5,100
Lockport	7,700	6,450
Evangeline	1,000	950
Edgerly	1,100	1,200
Others	3,100	3,050
Totals	18,850	16,750
Totals Gulf Coast	156,750	157,300

ARKANSAS

El Dorado	6,150	6,200
Smackover Light	11,600	11,650
Smackover Heavy	97,100	98,250
Stephens	1,350	1,350
Nevada	1,500	1,700
Lisbon	4,550	4,550
Others	150	200
Totals	122,400	123,900

MOUNTAIN STATES

WYOMING

Salt Creek	40,700	44,200
Grass Creek	2,850	3,000
Elk Basin	1,000	950
Big Muddy	2,800	3,150
Lost Soldier	3,650	3,700
Rock River	2,000	3,000
Teapot Dome	400	1,350
Lance Creek	800	700
Others	2,400	2,450
Totals	56,600	62,500

MONTANA

Cat Creek	2,350	2,350
Sunburst	12,000	12,000
Others	200	200
Totals	14,550	14,550

COLORADO

Moffats (Craig)	2,150	2,200
Fort Collins	3,300	3,500
Florence	700	700
Others	1,350	950
Totals	7,500	7,350

NEW MEXICO

Table Mesa	550	250
Artesia	1,950	1,950
Hogback	750	800
Rattlesnake	850	550
Totals	4,100	3,550
Totals Mountain States	82,750	87,950

EASTERN STATES

(Including Ill., Ind., Ohio, W. Va., Pa., Ky., and N. Y.	106,000	104,500

PRODUCTION SUMMARY

East of Rockies	1,754,350	1,752,650
United States	2,478,300	2,477,900

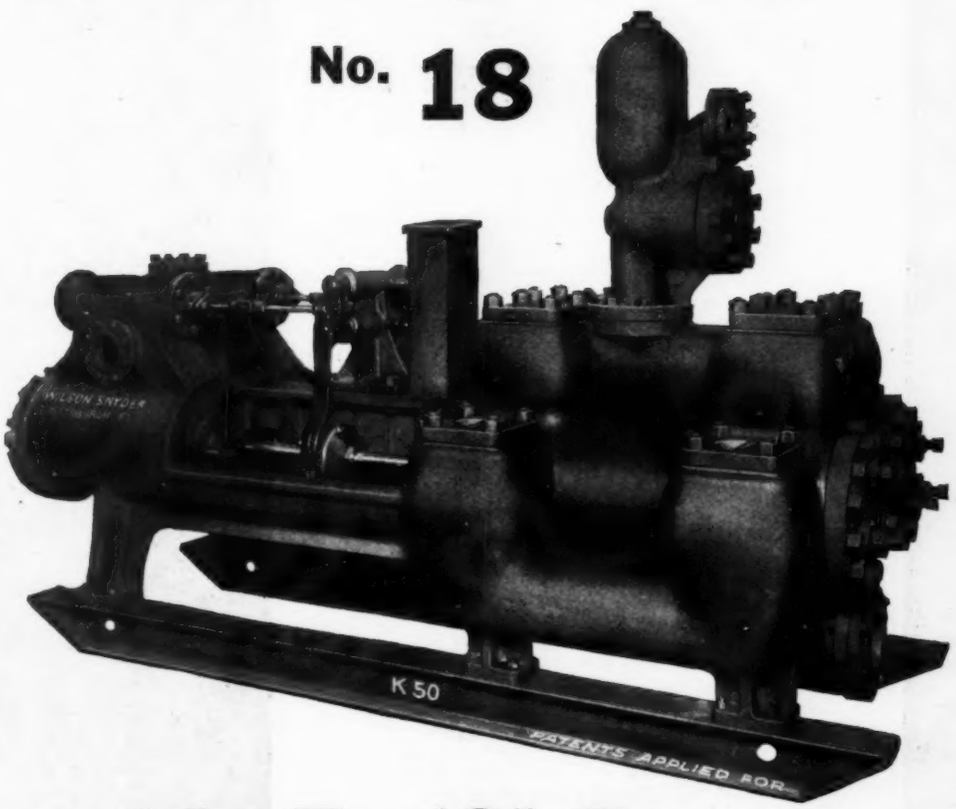
Wilson-Snyder-the first Slush Pump

built by

Heavy Duty Pump Builders

for Deep Drilling

No. 18



14x7x18" Stroke

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Direct Flow—more volume—less wear.
Balanced Piston Steam Valves—no drag—more power.

Every Pump tested before shipment

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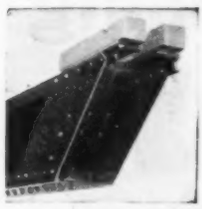


Both ends of the walking beam are heavily reinforced. On the nose, side plates are riveted to the flanges of the top and bottom reinforcing channels and through a channel separator to the web of the I beam. A heavy steel reinforcing plate is placed on the top flange just under the temper screw.

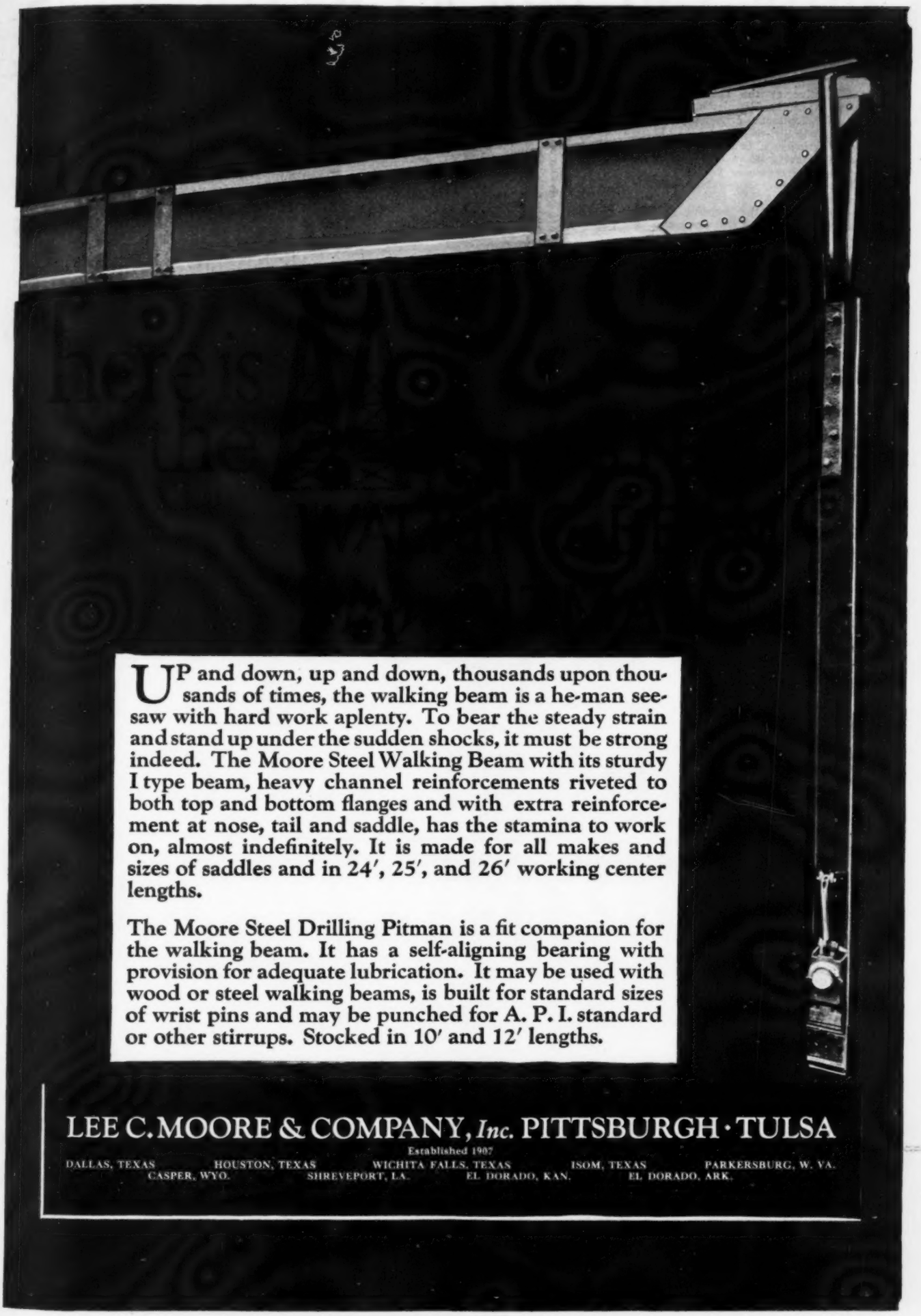
Self-aligning bearing is opened or locked in closed position by a lever. A toggle action prevents the bearing from opening without a direct pull on the lever. A double oil pocket provides for lubrication. Patent applied for.

Other Moore Products

Steel Derricks **Steel Tug Rims**
Steel Bull, Band and Calf Wheels
Crumley Pumping Rig Units
All Steel Drilling Rigs
Crumley Pumping Pitmans
Crown Blocks

Moore ALL STEEL RIG EQUIPMENT

Say you saw it in The OIL WEEKLY



UP and down, up and down, thousands upon thousands of times, the walking beam is a he-man see-saw with hard work aplenty. To bear the steady strain and stand up under the sudden shocks, it must be strong indeed. The Moore Steel Walking Beam with its sturdy I type beam, heavy channel reinforcements riveted to both top and bottom flanges and with extra reinforcement at nose, tail and saddle, has the stamina to work on, almost indefinitely. It is made for all makes and sizes of saddles and in 24′, 25′, and 26′ working center lengths.

The Moore Steel Drilling Pitman is a fit companion for the walking beam. It has a self-aligning bearing with provision for adequate lubrication. It may be used with wood or steel walking beams, is built for standard sizes of wrist pins and may be punched for A. P. I. standard or other stirrups. Stocked in 10′ and 12′ lengths.

LEE C. MOORE & COMPANY, *Inc.* PITTSBURGH · TULSA

Established 1907

DALLAS, TEXAS HOUSTON, TEXAS WICHITA FALLS, TEXAS ISOM, TEXAS PARKERSBURG, W. VA.
CASPER, WYO. SHREVEPORT, LA. EL DORADO, KAN. EL DORADO, ARK.

CRUDE OIL PRICE QUOTATIONS

CRUDE PRICE CHANGES

April 6.—Effective at the opening of the market today Magnolia Petroleum Company changed its Mid-Continent crude posting as follows: All grades below 33 gravity, $1.05. From 33 to 52 gravity, a two-cent differential was established, making 52 and above $1.45. This cut averages 15 cents per barrel.

On April 13 no other buyers had met the cut.

April 7—Effective at the opening of the market today the Grayburg Oil Company revised its postings on Somerset, Texas, crude and reduced its price 15 cents per barrel. The company has eliminated all gravity postings below 33 gravity and will now pay $1.05 for oil testing 33 and below. This corresponds with the cut made by the Magnolia Petroleum Company on April 6 in other fields.

Effective April 13, Joseph Seep Purchasing Agency announced reduction of 25 cents per barrel on Pennsylvania grades in New York Transit, Bradford District, National Transit, Southwest and Buckeye. Keister reduced 15 cents.

CURRENT POSTINGS

EASTERN STATES

	April 13 1927
New York Transit	$2.90
Bradford District	2.90
National Transit	2.80
Southwest	2.80
Eureka	2.75
Buckeye	2.60
Mackaburg	2.80
Gaines	2.60
Somerset	1.70
Cabell	1.60
Ragland	.95
Corning	1.50
Keister	1.30

CENTRAL STATES

Illinois	1.60
Indiana	1.48
Lima	1.71
Plymouth	1.33
Princeton	1.60
Waterloo	1.18
Wooster	1.77

WESTERN KENTUCKY

Posted by Stoll Refining Company for crude from Allen, Warren, Franklin, Davies, Barren, All grades 1.50

MID-CONTINENT

Prairie, Sinclair, Gulf, Texas

	April 13 1927
Below 28 (Magnolia only)	1.10
28 to 28.9 gravity	1.12
29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.16
31 to 31.9 gravity	1.18
32 to 32.9 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.30
38 to 38.9 gravity	1.32
39 to 39.9 gravity	1.34
40 to 40.9 gravity	1.36
41 to 41.9 gravity	1.38
42 to 42.9 gravity	1.40
43 to 43.9 gravity	1.42
44 to 44.9 gravity	1.44
45 to 45.9 gravity	1.46
46 to 46.9 gravity	1.48
47 to 47.9 gravity	1.50
48 to 48.9 gravity	1.52
49 to 49.9 gravity	1.54
50 to 50.9 gravity	1.56
51 to 51.9 gravity	1.58
52 and above	1.60

Magnolia Petroleum Company

Below 33	$1.05
33 to 33.9 gravity	1.07
34 to 34.9 gravity	1.09
35 to 35.9 gravity	1.11
36 to 36.9 gravity	1.13
37 to 37.9 gravity	1.15
38 to 38.9 gravity	1.17
39 to 39.9 gravity	1.19
40 to 40.9 gravity	1.21
41 to 41.9 gravity	1.23
42 to 42.9 gravity	1.25
43 to 43.9 gravity	1.27
44 to 44.9 gravity	1.29
45 to 45.9 gravity	1.31
46 to 46.9 gravity	1.33
47 to 47.9 gravity	1.35
48 to 48.9 gravity	1.37
49 to 49.9 gravity	1.39
50 to 50.9 gravity	1.41
51 to 51.9 gravity	1.43
52 and above	1.45

NORTH AND CENTRAL TEXAS

Ranger, North Texas, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie Moran and Nocona Crude

Humble O. & R. Co.* and Texas Co.

	April 13 1927
28 to 28.9 gravity	1.12
29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.16
31 to 31.9 gravity	1.18
32 to 32.0 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.30
38 to 38.9 gravity	1.32
39 to 39.9 gravity	1.34
40 to 40.9 gravity	1.36
41 to 41.9 gravity	1.38
42 to 42.9 gravity	1.40
43 to 43.9 gravity	1.42
44 to 44.9 gravity	1.44
45 to 45.9 gravity	1.46
46 to 46.9 gravity	1.48
47 to 47.9 gravity	1.50
48 to 48.9 gravity	1.52
49 to 49.9 gravity	1.54
50 to 50.9 gravity	1.56
51 to 51.9 gravity	1.58
52 and above	1.60

Corsicana Heavy, $1.00 per barrel, posted by Magnolia.

***Until further notice, Ranger, North Texas, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie, Moran and Nocona crudes purchased at agravity lower than 28 degrees will be paid for at the posted price for 28 degrees gravity.**

SOUTH TEXAS

Mirando	1.00

SOMERSET

Grayburg

Below 33 gravity	$1.05
33 to 33.9 gravity	1.07
34 to 34.9 gravity	1.09
35 to 35.9 gravity	1.11
36 to 36.9 gravity	1.13
37 to 37.9 gravity	1.15
38 and above	1.17

GULF COAST

Grade "A" all companies	1.20
Gulf Coast Light Oil, Below 25	1.15
25 to 25.9 gravity	1.17
26 to 26.9 gravity	1.19
27 to 27.9 gravity	1.21
28 to 28.9 gravity	1.23
29 to 29.9 gravity	1.25
30 to 30.9 gravity	1.27
31 to 31.9 gravity	1.29
32 to 32.9 gravity	1.31

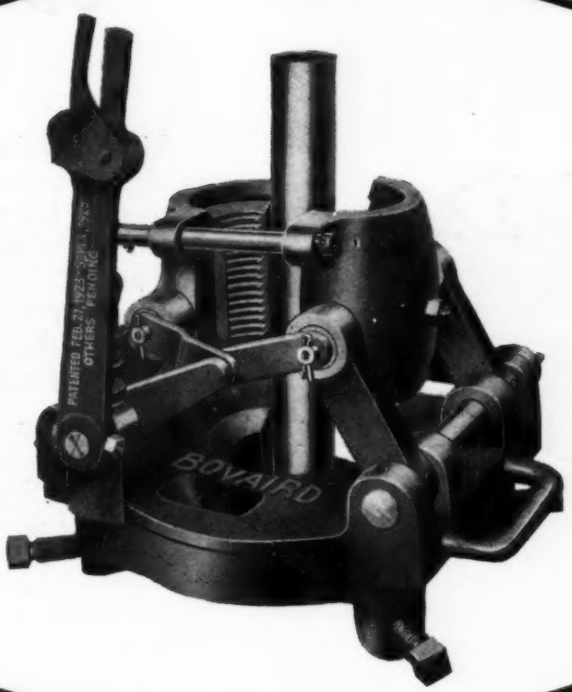
(Continued on page 68)

CALIFORNIA CRUDE OIL PRICES AT THE WELL

Following are the current prices offered by Standard Oil Company for crude oil at the well: (Price per barrel of 42 gallons in fields indicated)

Gravity (degrees)	Signal Hill	Seal Beach	Huntington Beach	Inglewood	Olinda-Brea Canon	Athens-Rosecrans Dominguez	Torrance	Richfield	Whittier La Harbra	Montebello	Coyote Hills	Santa Fe Springs	Newhall McKittrick Kern River	Midway Sunset Elk Hills	Buena Vista Hills	Lost Hills	Coalinga	Wheeler Ridge
14-14-9	$ .85	$ .85	$ .85	$ .85	$ .85	$ ..	$ .85	$ .85	$ .85	$ .85	$ .85	$ ..	$ .75	$ .75	$ .75	$ .75	$ .75	$ .75
15-15-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
16-16-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
17-17-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
18-18-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
19-19-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
20-20-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	..	.77	.77	.77	.76	.76
21-21-9	.86	.86	.86	.86	.86	..	.86	.86	.85	.85	.86	.85	..	.79	.79	.79	.77	.77
22-22-9	.87	.87	.87	.87	.87	..	.87	.87	.85	.85	.87	.85	..	.81	.81	.81	.78	.78
23-23-9	.88	.88	.88	.88	.88	..	.88	.88	..	.85	.88	.85	..	.83	.83	.83	.79	.79
24-24-9	.89	.89	.89	.89	.89	.89	.89	.89	..	.85	.89	.85	..	.85	.85	.85	.80	.80
25-25-9	.90	.90	.90	.90	.90	.90	.90	.90	..	.86	.90	.86	..	.87	.87	.87	.81	.81
26-26-9	.92	.92	.92	.92	.92	.92	.92	.92	..	.87	.91	.87	..	.89	.89	.89	.83	.82
27-27-9	.94	.94	.94	.94	.94	.94	.94	.94	..	.88	.92	.88	..	.91	.91	.91	.85	.83
28-28-9	.96	.96	.96	.96	.96	.96	.96	.96	..	.89	.93	.89	..	.93	.93	.93	.87	..
29-29-9	.98	.98	.98	..	.98	.98	..	.98	..	.90	.94	.91	..	.96	.96	.96	.89	..
30-30-9	1.00	1.00	1.00	..	1.00	1.00	..	1.00	..	.91	.95	.93	..	.99	.99	.99	.91	..
31-31-9	1.03	1.03	1.03	..	..	1 03	..	..	..	..	..	.95	..	1.02	1.02	1.02	.93	..
32-32-9	1.06	1.06	1.06	..	..	1.06	..	..	..	..	..	.97	..	1.05	1.05	1.05	.95	..
33-33-9	..	..	..	..	..	1.09	..	..	..	..	..	.99	..	1.08	1.08	1.08	.97	..
34-34-9	..	..	..	..	..	1.12	..	..	..	..	..	1.01	..	..	..	1.11	.99	..
35-35-9	..	..	..	..	..	1.15	..	..	..	..	..	1.03	..	..	..	..	1.01	..
36-36-9	..	..	..	..	..	1.18	..	..	..	..	..	1.06	..	..	..	..	..	..
37-37-9	..	..	..	..	..	1.21	..	..	..	..	..	1.09	..	..	..	..	..	..
38-38-9	..	..	..	..	..	1.24	..	..	..	..	..	1.12	..	..	..	..	..	..
39-39-9	..	..	..	..	..	1.27	..	..	..	..	..	1.15	..	..	..	..	..	..
40-40-9	..	..	..	..	..	1.30	..	..	..	..	..	..	..	..	..	..	..	..
41-41-9	..	..	..	..	..	1.33	..	..	..	..	..	..	..	..	..	..	..	..
42-42-9	..	..	..	..	..	1.36	..	..	..	..	..	..	..	..	..	..	..	..

FOR SALE BY ALL LEADING SUPPLY HOUSES



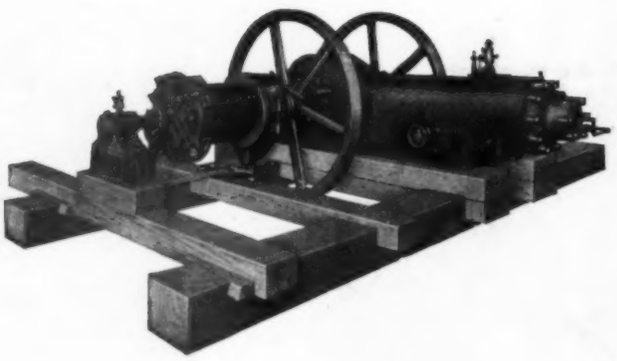
Because Your Tubing needs Protection

SUPPLY BOVAIRD COMPANY

Use a BOVAIRD Grip Tubing Spider Safe!

Say you saw it in The OIL WEEKLY

It makes no difference



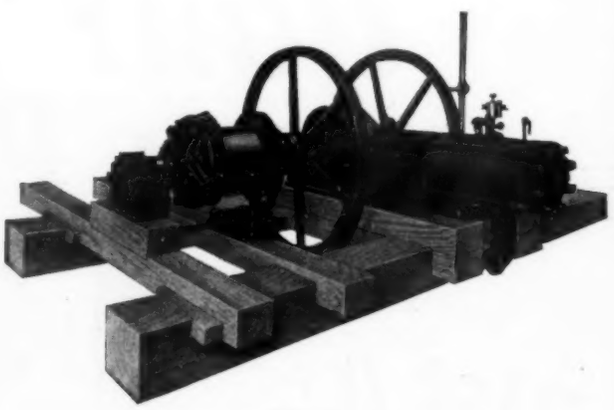
The big Franklin Valveless Oil Drilling Engine can be transported complete on one truck. It's easy to install, quick to start in any weather, and costs less to run than a "flivver". As for maintenance—we have many records of Franklin Engines that have drilled 10 to 30 wells without a **single cent** for repairs.

Mid-continent and western type $3700.-00 F.O.B. Franklin, Pa. Ask the nearest Oil Well Supply Company Branch for complete details.

The Engine Noted for Speed-Economy-Flexibility

If gas is available here's the logical power plant for you—the Franklin Valveless Gas Drilling Engine. In principle exactly like its oil-burning brother with the added advantage of **Interchangeability.** 25-30 H. P.—40 H. P.—50 H. P. and 60 H. P. Gas Engines can each be mounted on the same block without so much as changing a bolt hole. Price—for mid-continent and western service, $1,725.00 and $2,150.00. For eastern service, $1,450.00 and $1,725.00 complete. F.O.B. Franklin, Pa.

The nearest Oil Well Branch will give you complete details.



Where your well is—

OIL WELL SUPPLY CO.

will give you prompt service on

FRANKLIN VALVELESS ENGINES

While the experience of countless users of Franklin Engines testify to freedom from trouble in operation, it is satisfying to know that replacements, parts and intelligent service is readily available. Oil well Supply Company with its branches and warehouses in every active field have added Franklin Valveless Oil & Gas Engines to their line. It insures the operator of prompt deliveries of engines when he needs them. It insures him of parts and cooperation in teaching his men the simple fundamentals of their operation.

Franklin Oil & Gas Engines have proven their worth in the field to the point where the Oil Well Supply Company are ready to give them their endorsement.

100 Branches—100% Franklin!

These Oil Well Supply Branches can supply you.

Western Penna. District
Bolivar, N. Y.
Bradford, Pa.
Butler, Pa.
Clintonville, Pa.
Franklin, Pa.
Kane, Pa.
†Oil City, Pa.
Warren, Pa.
Washington, Pa.

South Texas and Louisiana District
Beaumont, Texas
El Dorado, Ark.
Houston, Texas
Luling, Texas
Mirando City, Texas
*San Antonio, Texas
†Shreveport, La.
Smackover, Ark.

Central Ohio, Kentucky and Illinois District
†Bremen, Ohio
Bridgeport, Ill.
Cambridge, Ohio
Casey, Ill.
Creston, Ohio
Lima, Ohio
Logan, Ohio
Newark, Ohio
Winchester, Ky.

West Virginia District
Cairo, W. Va.
Charleston, W. Va.
Clarksburg, W. Va.
†Parkersburg, W. Va.
*Sistersville, W. Va.
Marietta, Ohio
Woodsfield, Ohio

Colorado District
*Denver, Colo.
†Florence, Colo.

North Texas District
*Amarillo, Texas
*Ardmore, Okla.
Best, Texas
Breckenridge, Texas
Corsicana, Texas
Cross Plains, Texas
*Dallas, Texas
Duncan, Okla.
Electra, Texas
†Fort Worth, Texas
Isom, Texas
Mexia, Texas
McCamey, Texas
Olney, Texas
Pampa, Texas
Panhandle, Texas
Ranger, Texas
Wichita Falls, Texas
Wilson, Okla.

Wyoming and Montana District
†Casper, Wyo.
Rawlins, Wyo.
Kevin, Mont.

Mid-Continent District
Bartlesville, Okla.
Blackwell, Okla.
Bristow, Okla.
Cushing, Okla.
Eldorado, Kans.
Eureka, Kans.
Garber, Okla.
Madison, Kans.
Oilton, Okla.
Okemah, Okla.
Okmulgee, Okla.
Ponca City, Okla.
Quay, Okla.
Seminole, Okla.
Shidler, Okla.
Stroud, Okla.
Tonkawa, Okla.
†Tulsa, Okla.
Webb City, Okla.
Wetumka, Okla.
Wewoka, Okla.
Winfield, Kans.
Wynona, Okla.
†District Headquarters
*Office only.

Oil Well Supply Co., of California
Bakersfield (Oildale) Calif.
Brea, Calif.
Huntington Beach, Calif.
Long Beach (Signal Hill) Calif.
Los Angeles, Calif.
Maricopa, Calif.
Santa Fe Springs, Calif.
San Francisco, Calif.
Taft, Calif.
Torrance (Harbor City), Calif.

Foreign Branches
Cia Consolidada "OILWELL" S. A. Tampico, Mexico.
Oil Well Supply Co., Dashwood House, London, England

FRANKLIN VALVLESS ENGINE COMPANY
FRANKLIN, PENNA.

	April 13 1927
33 to 33.9 gravity	1.33
34 to 34.9 gravity	1.35
35 to 35.9 gravity	1.37
36 to 36.9 gravity	1.39
37 to 37.9 gravity	1.41
38 to 38.9 gravity	1.43
39 to 39.9 gravity	1.45
40 and above	1.47

*Humble Oil & Refining Company's postings on Gulf Coast Light stop at 35 to 35.9. Its price on all crudes above 35 is $1.37 per barrel.

Magnolia Petroleum Company's postings stop at 31 to 31.9.

MARKHAM
The Texas Company

All grades	1.00

LULING

All grades	1.15

TEXAS PANHANDLE
Magnolia Petroleum Company

Hutchinson, Carson and Gray counties, all grades	1.25

Humble Oil & Refining Company, Gulf Refining Company and Kay County Gas Company

all grades	.95

Gray and Wheeler Counties
Humble Oil & Refining Company

28 to 28.9 gravity	.80
29 to 29.9 gravity	.82
30 to 30.9 gravity	.84
31 to 31.9 gravity	.86
32 to 32.9 gravity	.88
33 to 33.9 gravity	.90
34 to 34.9 gravity	.92
35 to 35.9 gravity	.94
36 to 36.9 gravity	.96
37 to 37.9 gravity	.98
38 to 38.9 gravity	1.00
39 to 39.9 gravity	1.02
40 to 40.9 gravity	1.04
41 to 41.9 gravity	1.06
42 to 42.9 gravity	1.08
43 to 43.9 gravity	1.10
44 and above	1.12

Crane-Upton-Crockett* Counties
Gulf, Humble and Kay County Gas Company

Below 26 gravity	.70
26 to 26.9 gravity	.72
27 to 27.9 gravity	.74
28 to 28.9 gravity	.76
29 to 29.9 gravity	.78
30 to 30.9 gravity	.80
31 to 31.9 gravity	.82
32 to 32.9 gravity	.84
33 to 33.9 gravity	.86
34 to 34.9 gravity	.88
35 to 35.9 gravity	.90
36 and above	.92

*Gulf does not post in Crockett County.

Magnolia Petroleum Company and Kay County Gas Company

Howard County (Chalk Field)	1.43

WYOMING-MONTANA
Wyoming

Byron	1.33
Ferris	1.60
Elk Basin	1.33
Grass Creek	1.33
Rock Creek	1.25
Lost Soldier	.95
Lance Creek	1.33
Mule Creek	1.30
Notches	.65
Big Muddy	1.25
Osage	1.33
Hamilton Dome	.85
Pilot Butte	1.75
Torchlight-Greybull	1.55
Lander	.80
Simpson Ridge	.80
Rex Lake	1.10
South Casper Creek-Poison Spider	1.00

Salt Creek
Midwest Refining Company

29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.16
31 to 31.9 gravity	1.18
32 to 32.9 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 and above	1.30

	April 13 1927
MONTANA	
Sunburst	1.35
Cat Creek	1.33
Lake Basin	2.20
NEW MEXICO	
Artesia	1.00
Hogback	1.38
CANADIAN CRUDE	
Oil Springs	2.18
Petrolia	2.11

*Bounty on Canadian crude is ¾ cent per gallon, or 26¼ cents per barrel.

LOUISIANA-ARKANSAS
(Standard of Louisiana, Louisiana Oil Refining Company, Gulf Refining Company of Louisiana and The Texas Co.) Homer, Haynesville, Caddo, El Dorado, De Soto and Chrichton.

Below 28 gravity	1.10
28 to 28.9 gravity	1.12
29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.16
31 to 31.9 gravity	1.18
32 to 32.9 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.30
38 to 38.9 gravity	1.32
39 to 39.9 gravity	1.34
40 to 40.9 gravity	1.36
41 to 41.9 gravity	1.38
42 to 42.9 gravity	1.40
43 to 43.9 gravity	1.42
44 to 44.9 gravity	1.44
45 to 45.9 gravity	1.46
46 to 46.9 gravity	1.48
47 to 47.9 gravity	1.50

	April 13 1927
48 to 48.9 gravity	1.52
49 to 49.9 gravity	1.54
50 to 50.9 gravity	1.56
51 to 51.9 gravity	1.58
52 and above	1.60

Atlantic Oil Producing Company posts this same schedule on Homer, Haynesville, and West El Dorado.

Magnolia Petroleum Company has the same posting on Pine Island, Haynesville, Eldorado and Bull Bayou.

STEPHENS
(All Companies)

Below 28	1.00
28 to 28.9 gravity	1.02
29 to 29.9 gravity	1.04
30 to 30.9 gravity	1.06
31 to 31.9 gravity	1.08
32 and above	1.10

SMACKOVER
(Louisiana Oil Refining Company, Atlantic Oil Producing Company, and Shreveport-Eldorado Pipe Line Company)

Below 24 gravity	$1.00
24 to 27.9 gravity	1.15
28 to 28.9 gravity	1.17
29 to 29.9 gravity	1.19
30 and above	1.21

Other Companies

Below 24 gravity	1.00
24 and above	1.25
Bellevue	1.25
Jennings	1.15
Vinton	1.30
Edgerly	1.30
Starks Dome	1.30
Urania	1.00
Cotton Valley	1.00
Calion	1.00

RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF COAST PORTS

(American Petroleum Institute Figures. Barrels of 42 gallons)

(Barrels of 42 Gallons)

	Total Month March	Total Month February	Week Ended April 2	Week Ended March 26
At Atlantic Coast Ports				
Baltimore	515,000	734,000	70,000	.....
Boston	170,000	85,000	.....	170,000
New York	1,758,000	917,000	165,000	491,000
Philadelphia	430,000	240,000	.....	148,000
Others	416,000	511,000	.....	180,000
Total	3,289,000	2,487,000	235,000	989,000
Daily Average	106,097	88,821	33,571	141,286
At Gulf Coast Ports				
Tampa	15,000	.....	.....	.....
Daily Average	484	.....	.....	.....
Total Atlantic and Gulf Coast Ports	3,304,000	2,487,000	235,000	989,000
Daily Average	106,581	88,821	33,571	141,286
Distribution of Total California Oil Receipts is as follows:				
Crude	644,000	827,000	.....	312,000
Gasoline	953,000	788,000	.....	360,000
Gas Oil	525,000	396,000	235,000	75,000
Fuel Oil	1,182,000	476,000	.....	242,000
	3,304,000	2,487,000	235,000	989,000

IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

(American Petroleum Institute Figures. Barrels of 42 gallons)

(Barrels of 42 Gallons)

	Total Month March	Total Month February	Week Ended April 2	Week Ended March 26
At Atlantic Coast Ports				
Baltimore	145,000	336,000	.....	.....
Boston	408,000	404,000	77,000	.....
New York	1,968,000	2,444,000	476,000	354,000
Philadelphia	286,000	149,000	207,000	.....
Others	810,000	748,000	321,000	171,000
Total	3,617,000	4,081,000	1,081,000	525,000
Daily Average	116,677	145,750	154,429	75,000
At Gulf Coast Ports				
Galveston District	209,000	134,000	18,000	64,000
New Orleans and Baton Rouge	1,124,000	1,310,000	313,000	141,000
Port Arthur and Sabine District	75,000	60,000	.....	50,000
Tampa	151,000	101,000	40,000	22,000
Total	1,559,000	1,605,000	371,000	277,000
Daily Average	50,290	57,322	53,000	39,571
At All United States Ports				
Total	5,176,000	5,686,000	1,452,000	802,000
Daily Average	166,967	203,072	207,429	114,571

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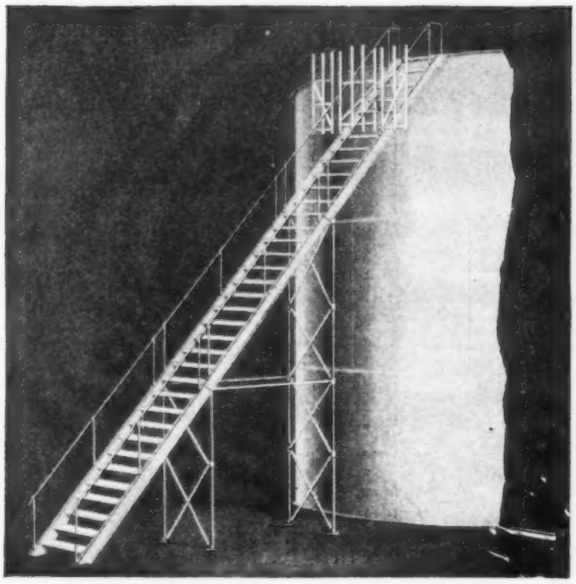
Check the equipment in which you are interested, tear out and return this page to us, and we will send complete information.



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BUILT from structural steel shapes, these steel stairways are strong, fireproof and safe. They are shipped knocked down, with the parts nested. Ordinary wrenches are the only tools required to erect them easily and speedily.

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Parkersburg Steel Stairways are adapted to various sizes of oil field, tank farm, pipe line and refinery tanks. Detailed specifications on request

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Say you saw it in The OIL WEEKLY

PERMITS GRANTED FOR NEW WELLS

WEEKLY COMPARISON OF NEW WELLS

Following is a condensed table giving a comparison of permits or locations made for new wells during the past year in Kansas, Oklahoma, Arkansas, Louisiana, Texas, California and the Mountain States:

	Week Ending April 8	Previous Week	Total This Month	Total This Year	This Week Last Year	This Month 1926	Total Same Date 1926	Year Total 1926
Arkansas	6	10	16	133	16	46	395	910
California	41	24	65	442	52	88	619	1,273
Louisiana	7	20	27	154	27	63	365	1,318
Kansas	9	18	27	392	24	63	634	1,745
Oklahoma	51	40	91	1,289	114	250	1,789	5,165
Texas	196	167	363	3,344	172	549	3,488	12,158
Mt. States	17	17	34	203	....	....	....	....
Totals	327	296	623	5,954	405	959	7,290	*22,599

*Does not include Mountain States.

TEXAS

Archer County—Marland, Fort Worth, Ward A5, 1379, TE&L sur, 150 ft to s and w lines. L. T. Burns, First Natl. Bank Bldg., Wichita Falls, Turbeville 8, blk 124, J. Harris sur, 300 ft e of 6; 9, 300 ft e of 6. C. W. Boller, City Natl. Bank Bldg., Wichita Falls, Leberman 1, Wm. Parker sur, 150 ft to w and 200 ft to s line. Shappell Oil Co., Wichita Falls, Berton-Desden 1, blk 7, McKinney-Williams sur, 150 ft to s and w lines. C. E. Newton, Holiday, D. M. Hughes 1, S 16, DCSL sur, 150 ft to s and e lines. Petroleum Prod. Co., Wichita Falls, Turbeville 5C, blk 124, R. Carson sur, 150 ft to n and w lines. Turbeville 1B, blk 124, J. W. Harris sur, 150 ft to s and e lines. Rayzor & Marland Oil Co., Harvey-Snider Bldg., Wichita Falls, Wilson 1, S 6, blk 3, H&TC sur, 150 ft n of center of s line. Petroleum Prod. Co., Wichita Falls, Turbeville 2B, blk 124, Club Ranch sur, 300 ft n of 1. Roxana Petroleum Corp., South Bend, Abercrombie B5, S 2, S. P. Ry sur, 750 ft to w and 450 ft to s line. Roy I. Carter, Wichita Falls, Benson 1, 1829, TE&L sur, 150 ft to s and e lines.

Atascosa County—Grayburg Oil Co., San Antonio, Hartung 22, E. Schnoover sur, 1420 ft to e and 740 ft to s line.

Angelina County—Roxana, Houston, Long Bell Lbr. Co. 6, P. Mullen sur, se cor.

Brown County—Texas Co., Cisco, Lowe 41, S 622, 300 ft e of 40. M. L. May, Cross Plains, Buyler 1, S 43, T&NO sur, 150 ft to n and e lines. W. P. Eads, Bangs, Texas Martin 1, S 11, HT&B sur, 150 ft to w and 1000 ft to s line. Gordon White et al, Box 119, Rising Star, Brown 1, J. Coffee sur, 158 ft to w and 155 ft to s line. G. W. Nickel, Box 412, Cross Plains, Hamilton 1, No. 791 W. M. English sur, 825 ft to w and 150 ft to n line. Valley Oil Co., Bradford Bldg., Wichita Falls, Teston 6, S 151, P. Curlong sur, 150 ft to s and e lines. Empire Gas & Fuel Co., Staley Bldg., Wichita Falls, Newton 2, No. 784 K. W. Harris sur, 300 ft n of 1. J. S. Owens, Box 514, Brownwood, Sewalt 1, No. 15 J. M. Steiner sur, 680 ft to s and 640 ft to e line. O. H. Shoup, Jr., Exchange Natl. Bank Bldg., Colorado Springs, Colo., Ratliff 1, A. D. Neil sur, 150 ft to s and w lines. Byler 16, No. 43 T&NO sur. Clayton Ryan, Brownwood, Brooks 2, No. 350, J. Hernandez sur, 150 ft to s and e lines. Rex Texas Oil Co. & Py-Texa Oil Co., Brownwood, Fry 15, No. 622 G. Stubblefield sur, 600 ft to w and 2130 ft to s line; 12, 600 ft to w and 950 ft to s line; 14, 600 ft to w and 1750 ft to s line. J. K. Hughes, Mexia, Shore 4, J. C. Ryan sur, 300 ft s of 3; 5, 300 ft s of 4; 6, 300 ft s of 5; 7, 300 ft e of 1; 8, 300 ft e of 7; 9, 300 ft e of 8; 10, 300 ft e of 9. Southern Drilling Co., Eastland, Mims 1, S 2, C. T. Ry sur, 150 ft to s and w lines. Schaffner & Ellis, Cross Plains, Hidden 1, W. H. Irmon sur, 150 ft to w and 5 ft to n line. Texas Co., Wichita Falls, Hickman 18, S 783, T. Benson sur, 300 ft n of 17. Lowe 40, No. 622 J. Stubblefield sur, 300 ft e of 37

Bexar County—Hamilton Land & Dev. Co., City Nat. Bank Bldg., San Antonio, Fee 18, 4 and 86, 2810 ft se of 7. Associated Petroleum Co., Fort Worth, Koehler 1, 449, R. Rodriguez sur, 150 ft to s and e lines. W. Caruthers 14, W. Caruthers sur, 503 ft e of 13.

Brewster County—Van McPhail, Worth Bldg., Fort Worth, McIntyre 1, S 59, B 352, 150 ft to se and e lines.

Brazos County—Edge, Davis & Harris, Bryan, Harris 1, Wm. Mathis sur, 151 ft to n and e lines. Verisco 1, Wm. Mathis sur, 150 ft e of center of w line.

Callahan County—Cisco Oil Co., Cisco, Williams 27, S 1 B E, T&P sur. J. E. Hudson, Aspermont, Tatum 1, S 150 BBB&C sur, 156 ft s and 450 ft to e line. W. B. Flynn, Beaumont, Wagley 7, 2729, TE&L sur, 150 ft to w and 450 ft to n line. Long & Kegans, Tulia, Grisham 1, 2300, TE&L sur, nw corner; 2, 300 ft e of 1; 3, 300 ft e of 2. Mortimer, Hobbs & Ferguson, Box 806, Abilene, Beasley 5, S 41, D&D Asy. sur, 150 ft to s and w lines. Moore & Snebold, Dan Waggoner Bldg., Fort Worth, Berry Bros. 1A, S 145, BBB&C sur, 660 ft se of 1. Godley Oil & Gas Co., Dallas, Buchanana 19, S 8, Bayland Asy. sur, 750 ft to n and w lines; 20, 750 ft to n and 1050 ft to w line.

Coleman County—C. F. Browning, Texas Hotel, Fort Worth, Hill 1, S 89, Bonds & Sanders sur, 150 ft to n and 1450 ft to w line. L. H. Wentz, Box 1002, Eastland, Shore 11, 625, C Betts sur, 150 ft to n and e lines; 12, 300 ft w of 11; 10, 810 ft to n and 150 ft to e line. Hoffer Oil Corp., Fort Worth, Cameron 1, 495, J. A. H. Cleveland sur, west central. Amerada, Cisco, Harris 127, 162, J. Sanders sur, 1320 ft e of 15. Harris B, 3, 162, J. Sanders sur, 3310 ft ne of 2. Monroe Prod. Co., Coleman, Caton 1, S 3, W. C. S. L. sur, 1570 ft to w and 2960 ft to n line. D. P. Fleeger, Coleman, Griffin 1, S 951, B 3, R Perry sur, 1800 ft to e and 200 ft to s line. Ungren, Frazier, Burkett & Fortster, Coleman, Tabor 1, B 167, M. McCarty sur, 800 ft to n and 450 ft to e line. Stein & Kaiser, Coleman, Roberts & Cain 1, 163 Wm. Mason sur, 200 ft to e and 500 ft to s line. L. H. Wentz, Eastland, Shore 13, 625, C. Betts sur, 300 ft s of center of n line.

Cooke County—Fain-McGaha Oil Corp., Waggoner Bldg., Wichita Falls, Chaffin 1, F. Reed sur, 150 ft to n and w lines. Thurman & Maxwell, Fort Worth, Alexander 1, J. Gregg sur, south central. Kewanee Oil & Gas Co., Box 1940, Tulsa, Okla., Dennis 1, T. J. Hutchinson sur, 150 ft to n and e lines. Lynch, Stahl & Burress, Muenster, Texas, Bayer 1, B 21, G. Ivy sur.

Clay County—Greer & Perkins, 220 Beall, Petrolia, Fry 1, B 83, P. C. S. L. sur, 750 ft to n and 400 ft to w line.

Comanche County—Abe Ratblatt, Cisco, Blakeley 1, S 290, T&NO sur, 400 ft to e and 650 ft to s line; 2, 850 ft w of 1; 3, 890 ft to e and 700 ft to s line.

Duval County—Magnolia, Dallas, Benavides 2, M. Arispe sur, 330 ft to n and e lines of blk 7. Carrillo 1, 82, GH&H sur, 600 ft s and 600 ft w of 12.

Eastland County—G. W. Dunaway, Ranger, Christmas 1, S 125, HT&B sur, 800 ft to s and w lines. Cranfill & Reynolds, Cisco, Collins 2B, S 3, H&TC sur, 150 ft to n and 660 ft to e line. Adamson & Bearman, Box 164, Cisco, Rosenquest 1, S 3, B 6, J. House sur, 150 ft to n and w lines.

Fort Bend County—Texas Co., Houston, 4, M. Young sur, 240 ft se of 2. Gulf, Houston, Davis 41, M. Young sur, 160 ft sw of 37; Wolfe 2, 68, H&TC Ry sur, 300 ft nw of 1. J. S. Abercrombie Co., West Bldg., Houston, West-Schenck 9, T. Hobermaker sur, 150 ft s of 1.

Fisher County—Sinclair, Fort Worth, Farmer 1, S 6, blk K, T&P sur, 750 ft nw and 583 ft to sw line. Ideal Oil Co., Patterson Bldg., Denver, Colo., Jameson 1, S 111, B 1, H&TC sur, nw corner of se¼.

Galveston County—Liberty Bell Oil Co., Perlstein Bldg., Galveston, Humphreys 1, G. Orr sur, se corner.

Gray County—Gladys-Gray Oil Co., Fuqua Bldg., Amarillo, Colebank 1, S 65, B 25, H&GN sur, 332 ft to s and w lines.

Hutchinson County—H. Hill & Riley, Amarillo, Cockrell 1, S 1, blk 3, 225 ft to w and 330 ft to s line. Derby, Haines & Williams, Wichita, Kansas, Johnson 2, S 22, B Y, M&C sur, 330 ft to n and w lines; 4, 330 ft to s and 280 ft to w line.

Howard County—Merrick & Bristow, Oklahoma City, Okla., Hooks 3, S 140, B 29, W&NW sur, 200 ft to w and 660 ft to s line. Magnolia, Dallas, Chalk 7, S 114, B 2 9, W&NW sur, 330 ft to n and e lines; 2, S 114, B 29, 330 ft to s and e lines. Pure Oil Co., Mexia, Chalk 1, B 29, W&NW sur, 200 ft to s and w lines; 2, 200 ft to e and 2440 ft to s line.

Harris County—Parker & Schott, Humble, Crow-Vineyard-Whistler 4, 8, Jas. Strange sur, 2000 ft to n and 150 ft to w line. G. L. Harris, Houston, Bering-Cortes 4, Jas. Strange sur, 450 ft to n and 275 ft to w line. Moody Corp., Houston, Wheeler-Pickens 3, B 42, Stephenson sur, 319 ft to n and 50 ft to e line. Gulf, Houston, Jones 3, 1028, J. A. Williams sur, 50 ft to s and w lines. Webb Oil Co., Humble, Cherry 29, B 4, Jas. Strange sur, 75 ft nw of 26.

Jefferson County—F. W. Branigar, W. La Salle St., Chicago, Terrell Realty Co. 1, 273, T&NO Ry sur, 950 ft to n and e lines. Magnolia, Dallas, Gladys 5, nw corner of blk 20. Yount-Lee, Beaumont, Gladys 26, J. A. Veatch sur, 684 ft to s and 205 ft to w line. McFaddin, Weiss & Kyle 31, P. Humphreys sur, 1180 ft to e and 745 ft to n line. Sun Beaumont, McLean 10, P. Humphreys sur, 30 ft to n and w lines; 11, 48 ft to sw and 50 ft to s line.

Jim Hogg County—Alworth, Stevens & Hild Co., Laredo, Garza 7, S 39, B 5, 350 ft to w and 200 ft to s line.

Jones County—J. L. Tomberlin, Alexander Bldg., Abilene, Hendricks 1, S 37, B 16, T&P sur, 660 ft to w and 150 ft to s line.

Karnes County—Stover & May, Bedell Bldg., San Antonio, Szalwinski 1, Manchaca sur, se corner.

King County—Sinclair, Fort Worth, Burnett 1, Wm. Elliott sur, 750 ft to n anw w lines.

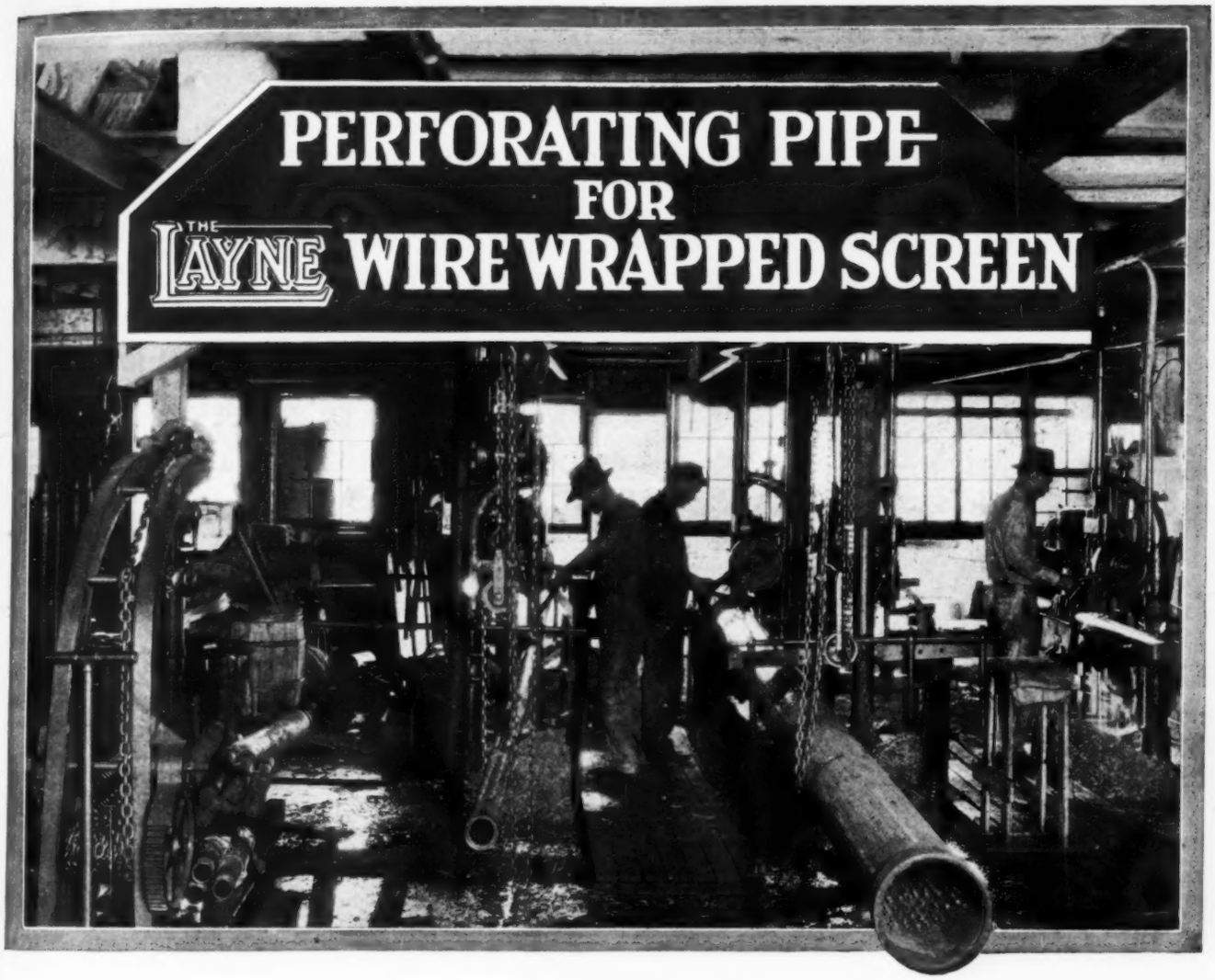
Lampasas County—Roesser & Pendleton, Inc., Fort Worth, Busch 1, W. A. Martin sur, center.

Montague County—J. I. Lesch Nocona, Maddox 1, H. S. Arnold sur, 150 ft to n and w lines. E. L. Smith Oil Co., Mexia, Maddox 9, C. W. Thompson sur, 450 ft to n and 150 ft to w line.

Milam County—Rockdale Oil Co., Rockdale, Hudson 1, T. S. Arnett sur, 155 ft to n and e lines. Blue Bonnett Oil Co., Rockdale, Stoebner 1, J. A. De Pena sur, 450 ft to s and w lines. Galler 1, W. Bishop sur, 450 ft e of center of w line.

Mitchell County—California Co., Colorado, Swenson 2, S 15, B 28, T&P sur, 330 ft to n and e lines.

Navarro County—Texas Co., Houston, Williams 1, B. Roberts sur, 1200 ft to nw and 1000 ft to ne line. Wilson & Harmnett, Corsicana, Blackburn 1, T. Morrow sur, 450 ft to n and 800 ft to e line. G. C. Kent, Corsicana, Hardy 15, S. F. McCandless sur, 300 ft ne of 9; 16, 150 ft to s and w lines; 17, 450 ft ne of center



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occupy a leading place in the industry because of their constant efficient performance.

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1—Pipe slightly recessed, wire wrapped in recess and sweated to pipe, forming a solid collar on both ends.

2—Keystone wire, accurately wound on pipe by our patented winding machine.

3—Lugs accurately sized and placed in vertical alignment under heavy side pressure; this insures accurate spacing between the wires and prevents displacement of the wire on the perforated pipe.

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The Layne New York Co.
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Los Angeles, Calif.

Vickers Limited
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of sw line. W. A. Reiter, Mexia, Adams 1, M. Boren sur, 150 ft to n and w lines.

Orange County—Rex Petroleum Co., Orange, Corbello 14, 350 ft to n and 200 ft to e line. W. C. Wells, Orange, Stark 2, H. F. Brack sur, 25 ft e of center of w line.

Palo Pinto County—Roth & Faurot, Independence, Kansas, Williams 1, S 50, B 2, T&P sur, 450 ft to w and 750 ft to s line. Orbit Oil Co., Cotton Exchange Bldg., Fort Worth, Morgan 1, S 76, B 1, T&P sur, 150 ft to n and e lines.

Pecos County—Buell & Hagen, Fort Stockton, McKenzie 1, S 8, blk 604, 1320 ft to n and e lines. Crosby Drilling Co., Box 486, McCamey, Yates 1, S 70, B 1, I&GN sur, 330 ft to s and e lines.

Reagan County — Big Lake Oil Co., Best Texas, University 89A, S 12, B 2, Univ. Lands sur, 520 ft w of 58.

Refugio County—Wm. F. Morgan, Travis Bldg., San Antonio, Rogers 2, 350 ft to e and 150 ft to s line; Lowhert 1, 150 ft to e and 1278 ft to s line.

Shackleford County — Roster & Pendleton, Inc., Fort Worth, Bernstein 1, S 532, TE&L sur, 150 ft to n and w lines. Huskey 1, 530, TE&L sur, 150 ft to n and e lines; 2, 400 ft sw of 1; 3, 300 ft sw of 1; 4, 300 ft sw of 3; 5, 300 ft nw of 1. Frye 20A, 384, TE&L sur, 300 ft ne of B15; B26, 320, TE&L sur, 300 ft now of B12; B27, 300 ft nw of B22; B28, 150 ft 300 ft nw of B14. Cook A51, S 50, 150 ft to s and e lines. Scott 1, S 172, B 1, E. T. Ry sur, center. Scott & Walker, Perkins-Snider Bldg., Wichita Falls, Huskey 100, 10, B 548, TE&L sur, 1944 ft to ne and 450 ft to se line. Thurman & Maxwell, Fort Worth, Goodwin-Walker 80, 1, S 60, B 13, T&P sur, north central. Dr. Charles Wm. Wallace, Wichita Falls, Waters 160, 8, blk 80, Univ. Lands. Lualen Corp., Kirby Bldg., Dallas, English 1, 541, TE&L sur, 150 ft to w and 1050 ft to n line; 2, 450 ft to n and e lines. M. O. Gaston, 2405 Oak Lawn, Dallas, English 1, 541, TE&L sur, 450 ft to nw and 390 ft to ne line.

Stephens County—Phillips, Bartlesville, Higginbotham 2, S 59, Blind Asy. sur, 167 ft to n and 173 ft to w line. Wm. McGinley, Fort Worth, Mitchell 1, S 64, B 4, T&P sur, 330 ft to e and 660 ft to s line.

San Patricio County—W. L. Pearson Corpus Christi, Cage 5, D. C. Rachal sur, 1065 ft s of 3; 6 1500 ft s of 5.

Wichita County—Texas Co., Wichita Falls, Waggoner 324, N. B. Mead sur, 4628 ft to w and 574 ft to s line. Trinity Production Co., Waggoner Bldg., Wichita Falls, Burnett 19, S 7, HT&B sur, 500 ft to n and 600 ft to w line. J. E. Dunaway et al, Fort Worth, Waggoner 3, S 33, B 5, H&TC sur, 340 ft s of 1. C. P. Sheldon, Electra, Frankl 5, B 328, Waggoner Col. sur, 50 ft w of 4. J. E. Ward, 2011 Jones St., Wichita Falls, Neal 1, B 169, J. M. Sharp sur, 1400 ft to n and 450 ft to e line. L. P. Hammond, Staley Bldg., Wichita Falls, Ferguson 4, B50, W. V. F. L. sur, sw corner. Dr. Chas. Wm. Wallace, Wichita Falls, Burnett 62, J. A. Bradford sur, 266 ft to n and 197 ft to e line. Fresno Oil Co., Box 108, Wichita Falls, Sides 6, C. Winters sur, 72 ft w of 2. Dodson 7, C. Winters sur, 130 ft s of 3. Cropper 17, C. Winters sur, 157 ft e of 6; 18, 120 ft w of 12. Magnolia, Dallas, Beach 45, C. T. Ry sur. J. E. Dunaway, Wichita Falls, Waggoner 2, S 33, B 5, H&TC sur, 50 ft w of 1. Texas Fidelity Oil Corp., Fort Worth Nat. Bank Bldg., Fort Worth, Peeler 18, H. B. Balch sur, 150 ft to s and w lines. Karlten Brink 2307, Grant Ave., Wichita Falls, Hardin 4, O. Farris sur, 300 ft w of 1. E. W. Boyd, Holt Hotel, Wichita Falls, Waits 21, BBB&C sur, 962 ft to n and 848 ft to s line.

Wilbarger County—Milham Corp., Travis Bldg., San Antonio, Waggoner 22L, S 42, B 4, H&TC sur, 50 ft w of 13. Phillips Petroleum Co., Bartlesville, Waggoner QQ21, S 47, B 4, H&TC sur, 100 ft e of 1; 20, 325 ft n of 19; D17, S 42, 220 ft to n and e lines; Y6, S 43, 220 ft to s and w lines; H11, S 46, 50 ft s of 1. Fain-McGaha Oil Corp., Waggoner Bldg., Wichita Falls, Waggoner G1, S 51, B 4, H&TC sur, 150 ft to s and w lines. Gulf, Fort Worth, Blackman 4, W. A. McKinney sur, 309 ft e of 2. W. P. Anderson, Burkburnett Bldg., Fort Worth, Waggoner 1, S 29, J. Poitevent sur, 150 ft to n and 400 ft to w lines.

Wheeler County—North Fork Oil Co., Amarillo Bldg., Amarillo, Jackson 1, S 11, B 27, H&GN sur, sw corner. Tidal Oil Co., W. T. Waggoner Bldg., Fort Worth, Thompson 1, S 42, B 24, H&GN sur, 330 ft to n and e lines; 2, 330 ft to n and w lines. J. J. Rook, Shamrock, Mertel 1, S 4, B 24, H&GN sur, 330 ft to s and e lines.

Walker County—Southern Crude & Dixie Oil, Slattery Bldg., Shreveport, Hendricks A1, S 44, B 26, School Lands sur, 330 ft to s and e lines.

Wharton County—Gulf, Houston, Chase 4, S. F. Austin, sur, 300 ft to s and w lnes.

Webb County—Suladie Oil Co., Mirando City, Puig 4, blk 49, 600 ft to w and 150 ft to s line. D. J. Simmons, 3112 Oderra St., Fort Worth, Garza 2, S 335, blk 1-8, 450 ft to n and 150 ft to w line.

Young County—Jacob Oil & Gas Co., Graham, Weldon 1, B 176, W. B. Lyttle sur, 150 ft to s and w line. B. T. Tackett, Brown Bldg., Wichita Falls, Prideaux 2, Rohus sur, 150 ft sw of center of ne line. Texas Co., Wichita Falls, Leberman 1, 154, TE&L sur, 450 ft to s and w lines. Halmack Oil Co., American Exchange Nat. Bank, Dallas, Watson 3, blk 22, se corner. Bridewell & Heydrick Oil Co., Wichita Falls, Hamilton 1, 1480, TE&L sur, 150 ft to n and e lines. Tarkenton & Schoolfield, Wichita Falls, Prideaux 1, S G, Wm. Stoneham sur, 150 ft to n and 200 ft to w line.

Zapata County—P. D. Miller, McAllen, Cartagena 32, 1, C. Redondo sur, sw corner; 2, ne of 1; 3, ne of 2.

LOUISIANA

Caddo Parish— A. C. Glassell, Shreveport, Thigpen-Heold 1, 26-18n-16w, 1371 ft n and 645 ft e of sw cor. Gulf Ref. Co., Shreveport, F. E. Wemple 5, 14-20n-15w, 1980 ft n and 1520 ft e of sw cor. Standard Oil Co., Shreveport, W. P. Stiles 183, 33-21n-16w, 77 ft n and 862 ft e of sw ne ne.

Franklin Parish—Barbour Oil Co., Shreveport, Baker 1, 3-15n-7e, 150 ft s and 150 ft e of nw of nw of sw.

Ouachita Parish—La Del Oil Prop. Inc., Monroe, La Del 40, 29-20n-5e, 760 ft s and 660 ft e of nw cor; La Del 41, 31-20n-5e, 660 ft n and 660 ft e of sw cor.

Winn Parish—H. L. Hunt, Inc., El Dorado, Ark., Tremont Lbr. 1, 27-10n-1e, 200 ft n and 400 ft w of se of sw of nw.

KANSAS

Butler County—Payne et al, Unger 1, ne nw sw 30-26-4. Phillips, Henry 1, se sw ne 4-27-6.

Chase County—Kewanee, Lipps 1, c ne nw 36-18-6.

Cowley County—Neely's Bell 1, nw ne 5-33-5. Forrester et al, Countryman 1, ne nw 4-33-7.

Greenwood County—Schwartz et al, Kipfer 1, nw 12-22-11. Murphy et al, Edwards 1, ne sw 7-26-10.

Marion County—T. B.Slick et al, Rogers 1, nw se se 20-17-1. Prairie, Nowerer 1, se ne 21-17-4.

OKLAHOMA

sw nw 19-1-3. Carter,Kimbrell 5, nw sw 22-2-3. Magnolia, Riley 1, ne sw 17-2-2.

Creek County—Transcontinental, Hoover 3, ne se 21-17-8. Buckles, Frailey 1, nw ne se 22-18-8. Kessler et al, Meten 1, se sw nw 27-14-10. Curtis et al, Thompson 1, lot 8, blk 16, se se ne ne 6-18-12. Denver Fuel Co., Townlot 1, lot 3, block 17, ne se ne 6-18-12. Redgraves et al, Snow 2, sw se se 15-18-11.

Grady County—Magnolia, Smith 2, se ne 35-5-8. Berry et al, Gardner 2, c se se 3-4-8. Magnolia, Harrison 5, ne se ne 28-3-5.

Kay County—Harris et al, Jameson 1, c se ne 8-27-1.

Kingfisher County—Galt-Brown Johnson 1, c nw 26-16-5.

Muskogee County—Denton et al, Taylor 1, nw sw 16-15-17. Vise et al, Grayson 3, ne nw sw 23-15-15.

Osage County—Tidal 2, se 28-21-10. Spring 2, ne se ne 36-22-11. American, 1, nw ne 24-23-10. I. D. Simmons, 4, ne sw sw 30-24-9. I. T. I. O. Co., 363, sw se sw 27-25-8. Phillips, 12, se ne ne 29-26-6. Prairie, 1, se sw 30-25-9; 2, ne sw 30-25-9. Phillips, 8, ne se ne 29-26-6; 5, nw sw se 1-27-5.

Pawnee County—Privett Drlg. So., Curtis 1, se ne se 28-21-6.

Pottawatomie County—Westheimer et al, McKay 1, nw sw nw 24-7-4.

Seminole County—C. L. McMahon et al, Sewell 1, se nw sw 15-8-6. Independent et al, Sewell 2, nw se sw 15-8-6. Crosbie, Sewell 2, sw ne sw 15-8-8. Wentz et al, Lamony 1, sw nw ne 21-8-7. Roxana, Taylor 5, sw se ne 16-8-6; Prairie 1, nw sw 2-8-6. Phillips, Chupco 1, ne nw 3-8-6. Mid-Kansas, Jacksey 1, se ne ne 3-8-6. Texas, Strothers 1, nw sw nw 2-8-6; Strothers 2, sw nw nw 2-8-6. Carter, Cramer 1, sw se 34-9-6. Roxana, Harber 1, se sw se 22-9-6. Wilcox, Cluck 6, ne nw 4-9-6. Barnsdall, Pack 3, se 10-9-5; Pack 4, sw se se 10-9-5. Carter, Payne 1, nw se 12-9-5; Payne 2, sw se 12-9-5.

Stephens County—Wirt Franklin, Apple-Franklin 2, nw ne se 24-1-4. Magnolia, Shaffer-Young 8, sw se se sw 29-1-8.

Tulsa County—Holmes et al, Grayson 1, ne sw se 32-19-10.

Wagoner County—Central National, Morrison 1, ne nw nw 9-16-15. Mitchell, Grayson 1, nw ne 14-16-16.

MOUNTAIN STATES

NEW MEXICO

Arena Oil Co.'s Chaves County 1, 24-12-30. T. C. N. Oil Co., San Juan County 1, SW¼ 9-29-11. Barrett-Beardsley, San Juan County 1, 19-27-11. Hasson Pet. Co., Curry County 1, 22-8-36. Childers' Drilling Co., McKinley County 1, ne 19-18-10.

COLORADO

Francisco Drilling Co.'s Montrose County 1, sw 27-50n-10.

MONTANA

Calpet Oil Co., 7, ne 27-35-2w; 1, se 21-35-1; 8, sw 10-35-2. Red Deer Oil Co.'s 8, sw 29-35-1w. Arcus-Cal Oil Co., 4, sw 19-35-1w. Frazer Oil Co.'s 4, ne 3-34-2w. California Pet. Co.'s 1, nw 26-35-2w; 8, ne 28-35-2; 9, se 28-35-2w. Hatch-Malon Oil Co., 1, sw 20-35-1w. Great Northern Oil Co., 1, nw 12-35-2w.

CALIFORNIA

Colusa Coounty—Brown-Hihn, 1, 31-15-4.

Huntington Beach—Standard, Bolsa 29, 34-5-11; Bosa 30, 34-5-11. Barneson & Macklin, Laughlin 1, 10-6-11. Neal D. McPhail, 1, 34-5-11.

Inglewood—California-Eastern Oil Co., Cypress Heights 1, 27-2-14.

Long Beach — California-Eastern Oil Co., Maaser 1, 29-4-12. Brayton 1, 30-4-12.

Midway—Honolulu Cons. Oil Co. 6, 8-32-24. Standard, 46, 9-32-24.

Richfield — Associated, Bayha 5, 33-3-9. Continental, Kraemer 4, 30-3-9. General, Thompson 10, 28-3-9.

Seal Beach — Marland, Bixby 17, 11-5-12; 18, 11-5-12; 19, 11-5-12. McGrath & Selover 15, 3-5-12; 16, 3-5-12; 17, 3-5-12; 19, 3-5-12. Dominguez Extension Oil Co., 2, 3-5-12. Associated, Bryant 31, 11-5-12. Cal. Pet. Corp., Smith 1, 3-5-12; Benton 1, 3-5-12. General Pet. Corp., Wasem 9, 3-5-12. Marland Oil Co., Bixby 16, 11-5-12. McGrath & Selover 9, 3-5-12. Superior Oil Co., Green 1, 3-5-12; Horwitz 1, 3-5-12. Fred A. Walker, Parker 1, 4-5-12; Jones 1, 4-5-12. Cal.-Eastern Oil Co., Person 1, 3-5-12; Graves 1, 3-5-12; Ostaff 1, 3-5-12; Fueller 1, 3-5-12; Horowitz 1, 3-5-12.

Sespe—Clampitt & Withrow, 9, 1-4-20.

Sunset—Banklin Oil Co., 11, 6-11-23. General Midnorth 17, 32-12-23.

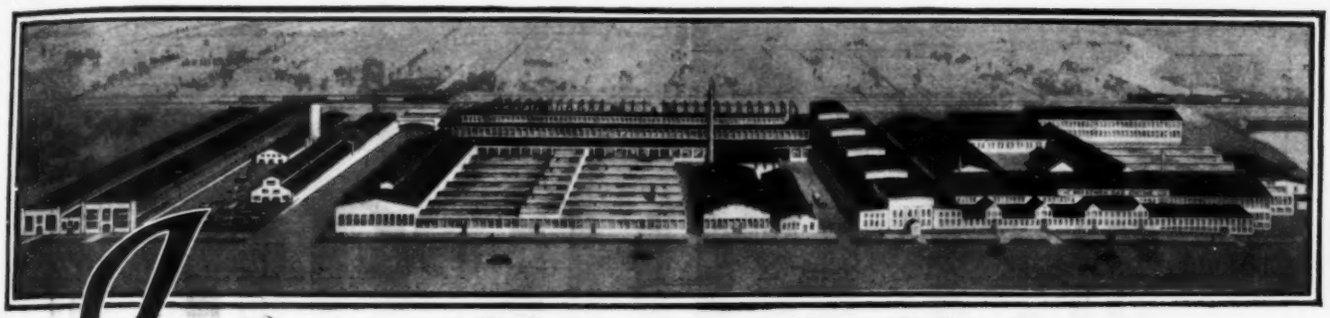
Ventura—Pet. Securities Co., Willett 2, 28-3-23.

Wheeler Ridge—Standard, Kern Co. Lease 2, 27-11-20.

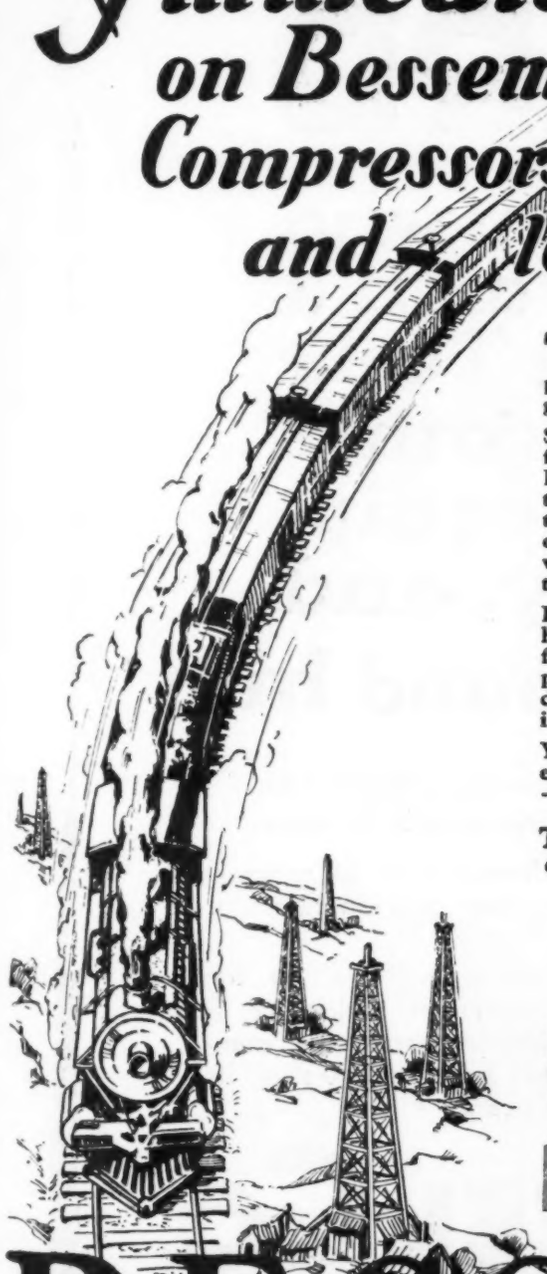
ARKANSAS

Ouachita County—Gulf, R. Bennett 11, 33-15-15, 621 ft n and 1250 ft e of sw cor; H. Murphy 44, 3-16-15, 2388 ft n and 740 ft e of sw cor.

Union County—Humble, Pate 10, 10-16-15, 2420 ft n and 530 ft w of center. Magnolia, Union Lbr. 1, 21-16-16, ne of ne of nw. Simms Oil Co., Crawford 1, 14-18-13, nw of nw of ne. Sun Oil Co., Hays 3, wo, 3-16-15, 200 ft n and 200 ft w of se nw nw



Immediate delivery— on Bessemer Type Ten Compressors—for both high and low pressure work



THE BESSEMER FACTORY can make Immediate deliveries on Type Ten Compressors—both with special cylinders for high pressure work or with standard cylinders for lower pressures for gasoline plant work.

Someone started the rumor that Bessemer Type Tens were sold out for months ahead. This is not exact. True, the huge Bessemer Factory is working at capacity to meet the enormous demand for these popular compressors, but greatly increased production facilities have enabled Bessemer to keep pace with the ever-increasing orders. Additional plant space, new machinery and 1,600 skilled workers enable the Bessemer factory to ship Type Tens as fast as the orders are received at the factory.

In spite of the large and growing demand for Type Tens with special high pressure cylinders for flowing wells and for the standard units for gasoline plant work, you can get Bessemers (the best by proven performance) *immediately*. Of course, Bessemer in doing a tremendous business—sheer merit has built it up—but their plant capacity is tremendous too.

You *can* get Bessemers *now!* Don't be misled into buying stop-gap equipment when you can get known performance, known reliability—known quality—Bessemers.

THE BESSEMER GAS ENGINE COMPANY
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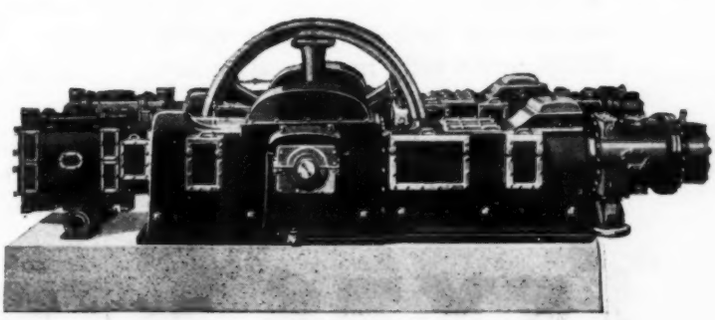


BESSEMER

BESSEMER OIL FIELD ENGINES – COMPRESSORS **VACUUM PUMPS – ROLLER PUMPING POWERS**

Say you saw it in The OIL WEEKLY

We Have Offered a $5.000.00 REWARD

~for the man who would rather drill a well with the Tools of 20 years ago than ~the modern equipment of today, and we haven't found him

But we do know of thousands of wells being pumped with sucker rods that have not been materially improved in 20 years.

THAT'S the reason we are frankly proud of the fact that we are the **first to offer a really NEW and vastly improved** sucker rod to the oil industry.

We openly admit that the ***Texas Electric Steel Sucker Rod*** is NEW. If it were not we would not be offering it to the progressive companies and operators of today.

Although it is NEW on the market, its super endurance is **well established with the companies that have been testing its merit for years.**

TEXAS STEEL Co.

ELECTRIC STEEL MAKERS, ROLLERS AND FINISHERS~
FORT WORTH, TEXAS

COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

OKLAHOMA

Company, Well and Location	Initial Production Bbls.	Depth
Carter County—		
Simpson et al, Hales 2, sw nw nw 11-2-3	225	2982
Magnolia, Miller 2, ne se sw 28-1-3	165	3186
Merrick et al, Dixon 1, se sw nw 19-1-3	120	2922
Creek County—		
Murphy et al, Fee 2, se sw nw se 32-14-10	70	3388
Atlantic et al, Allcorn 1, se 19-14-9	35	3244
C. G. Tibbens, Montgomery 1, sw ne 20-15-9	5	2829
Carpenter et al, Jackson 3, se ne sw 22-17-11	20	2411
W. H. Elson et al, Harris 1, sw nw ne 12-17-10	720	2438
Carter, Harris 1, nw sw ne 12-17-10	510	2424
Iron Mt., Self 1, ne nw sw 2-17-10	20	2039
J. H. Rebold, Townlot 1, lot 1, blk 17, ne se ne 6-18-12	650	2208
O'Reilly et al, Townlot 1, lot 40, blk 18, se ne se ne 6-18-12	40	2252
Love et al, Townlot 1, lot 35, blk 16, sw se ne ne 6-18-12	195	2253
Shaffer, Tiger 15, se sw nw 17-17-7	¶4	2742
Jones 2, sw se nw 26-18-7	¶32	2930
Coker 1, ne nw nw 17-14-8	*	3965
Slick et al, Doyle 2, c n l sw se 32-14-10	*	3387
Gray, Withers 1, ne nw se 1-14-10	*	3124
Tibbens, Fields 4, sw nw sw 30-15-9	*	2400
Bear 1 nw sw 24-14-8	*	2936
Pioneer Pet. Co., Lewis 1, nw 19-17-11	*	2884
Sheridan, Bruner 1, sw 22-18-11	*	2309
Regal, Barnett 16, se nw sw 13-18-11	*	2326
Garfield County—		
Sinclair, Hartley 56, ne sw sw nw 18-22-3	25	1335
Windler 16, nw se sw 30-22-3	20	2119
Grady County—		
Carter, Abernathy 4, n ne sw 35-3-5	15	1492
Horton 3, nw se se 8-3-5	137	1867
Magnolia, Miller 2, ne 28-3-5	365	1755
B. Mitchell 2, ne se nw 34-3-5	30	1460
Harrison 4, se ne ne 28-3-5	388	1762
Amerada et al, Hicks 2, sw nw se 16-3-5	30	1727
Hicks 3, se sw se 16-3-5	100	1725
Critchlow et al, Adair 3, ne sw nw 27-3-5	165	1844
Henry et al, Pursley 1, ne nw se 26-4-6	*	3014
Hughes County—		
Gypsy, Turner 1, se nw 32-8-11	¶65	1574
Independent, Long 1, se nw nw 14-8-9	160	3438
Burke-Greis, Hamphill 1, ne nw se 21-8-10	*	3416
Kay County—		
Marland, Dickerson 6, nw se 17-29-1	75	2342
Carter et al, Nixon 3, nw sw ne 17-29-1	¶27	1985
Nixon 2, sw ne 17-29-1	112	2342
Comar, Brown 4-w, se sw se 16-29-1	175	3551
Marland et al, Currie 1, sw se 6-26-1	*	3717
Wentz, Mahoney 10, ne sw se 28-25-1	*	....
Tidal, Boggs 4, sw nw se 8-27-1	*	....
Muskogee County—		
Summerville, Dinwiddie 2, se nw ne 17-15-17	¶20	1415
Okfuskee County—		
Josey, McCoy 10, c n l sw nw 33-12-11	150	3592
McCoy 15, nw se nw 33-12-11	135	3649
Champlin, Ingram 2, sw nw sw 14-11-11	112	3553
Jacobs 6, ne se se 15-11-11	280	3543
J. J. Deaner, Likewake 2, ne sw 23-11-11	20	2437
Atlantic et al, Jackson 4, c nw sw 35-11-11	60	2513
Okmulgee County—		
J. L. Selby, Flint 9, c w l nw se 26-14-14	¶1	586
McCullough, Flint 5, ne nw nw 25-14-14	*	1932
Turner et al, Penoka 1-a, ne se sw 9-16-12	*	2413
Osage County—		
Phillips, 5, nw sw se 7-27-6	125	3005
Osage Gas Prod., 376, nw se sw sw 5-27-11	¶2	1882
Phillips, 8, ne se se 20-26-6	200	2951
Texas Co., 6, se nw ne 28-26-6	100	2960
I. T. I. O., 357, nw ne 13-24-8	¶17½	853
359, c n l nw ne 29-23-8	¶5	1360
Mid-Continent 5, se nw 20-24-9	25	2160
Tidal, 5, nw se 20-24-9	60	2268
Winona 22, ne sw ne ne 28-24-10	50	1380
New England 2, ne se sw 17-23-10	150	2503
Eddington et al, 8, nw ne nw nw 3-22-9	15	1041
Gillespie, 11, se ne ne 5-20-12	*	1464
Pawnee County—		
Sheridan, Tillock 1, ne sw ne 20-20-10	20	2282
Fern's Lesher 4, sw nw 22-20-6	40	3106
Seminole County—		
Barnsdall, Pack 1, ne se se 10-9-5	1065	3558
Mid-Kansas Cully 1, ne se ne 3-8-6	600	4254
Mid-Continent, Rentie 7, se nw se 14-9-6	50	4075
Tayocke 2, nw se sw 24-9-6	100	4107
Magnolia, Holmsley 1, sw ne se 11-9-5	125	4280
Sparks 2, sw nw sw 11-9-5	552	3492
Williams 1, se nw 2-9-5	*	4304
Independent, Walker 3, ne se se 29-8-8	50	3202
I. T. I. O. Livingston 2, sw se nw 15-8-6	6060	4126
Gypsy, Walker 2, ne nw se 15-8-6	3365	4110
July 1, nw ne nw 36-9-6	*	....
Carter, Bowlegs 1, nw se sw 15-8-5	5800	4151
Cudjo 1, se sw 34-9-6	770	4220
Scott 1, nw 26-10-6	110	4321
Killing 5, sw nw se 14-9-6	*	4215
Knapp 4, nwc sw 13-9-6	*	4299
Harjo 1, sw ne 36-9-6	*	....
Barnsdall, Harjo 1, se ne sw 10-9-5	195	3584
Ingram 1, se nw 1-9-5	500	3528
Gypsy et al, Johnson 1, nw se ne 15-9-6	*	4410
Hoffer's Reed 1, nw ne nw 6-6-8	*	4023
Tidal's Harjo 1, sw ne 36-9-6	*	....
Searight et al, Epperson 8, ne se ne 33-10-6	*	106
Epperson 5, nw sw ne 33-10-6	*	....
Work 2, ne nw 24-8-6	*	....
Stephens County—		
Gilmer et al, Stewart 1, se ne se 24-1-4	730	2932
W. H. Gent, School Land 5, nw ne ne 36-1-9	55	2185
Magnolia, Dora Russell 13, sw se se 25-1-9	150	2164
Hollingsworth 6, ne sw sw 14-2-5	*	1680
Kidney et al, Nelson 3, nw sw se 28-1-8	*	1460
McBride et al, Goodman 1, se sw nw 2-14	*	3225
Tulsa County—		
Superior et al, White 1, c e l w½ sw sw 10-19-19	10	1857
Minshall et al, Fife 5, ne se sw 15-1911	180	2146
Comanche County—		
Westheimer et al, Cox 1, sw se se 13-2-10	*	2185
Wagoner County—		
Central National's et al, Morrison 1, ne nw nw 9-16-15	*	1134
Lincoln County—		
Hull's Foster 1, ne 27-15-6	*	4334
Noble County—		
Geo. Miller, 101 Ranch, ne 1-24-1	*	4509
Payne County—		
Noble's Quay Townsite 11, se nw nw 6-19-6	*	3690
Pottawatomie County—		
Tidal's Pool 1, se ne nw 9-9-5	*	....

SUMMARIZED REVIEW OF FIELD RESULTS

State—	Completions This Week	Completions Last Week	Producers This Week	Producers Last Week	Gas Wells This Week	Gas Wells Last Week	Failures This Week	Failures Last Week	Initial Production This Week	Initial Production Last Week
Arkansas	10	11	7	6	1	2	2	3	457	277
California	20	11	19	11	..	..	1	..	6,841	8,452
Colorado	2	1	..	1	..	..	2	..	....	500
Indiana	8	2	2	1	1	1	5	..	45	30
Illinois	6	2	5	1	..	..	1	1	....	3
Kansas	23	36	14	22	..	2	9	12	1,905	4,032
Kentucky	23	25	19	21	2	..	2	4	775	1,280
Louisiana	21	17	11	9	2	1	8	7	7,590	635
Michigan	5	6	5	6	..	..	..	..	105	495
Mississippi	..	..	..	..	..	..	..	..	....	....
Montana	3	4	3	4	..	..	..	..	1,150	675
New York	9	..	9	1	..	..	..	..	49	35
New Mexico	2	1	2	..	..	..	..	..	90	....
Ohio	26	38	14	23	5	10	7	5	550	1,167
Oklahoma	111	99	64	58	10	7	37	34	30,091	36,945
Pennsylvania	57	37	51	35	5	1	1	1	185	84
Tennessee	..	1	..	1	..	..	..	..	....	200
Texas	155	181	94	111	13	3	48	67	30,452	38,868
West Virginia	29	14	4	4	20	4	5	6	28	95
Wyoming	8	8	7	8	1	..	..	..	3,205	9,370
Totals	518	494	330	323	60	31	128	140	83,518	103,143
Increase this week	24	..	7	..	29	..	..	..	....	....
Decrease this week	..	..	..	..	..	..	12	..	9,625	....

KANSAS

Company, Well and Location	Initial Production Bbls.	Depth
Butler County—		
Rosenthal et al, Shaffer 3, nw sw se 4-27-6	250	3160
Phillips, Beedles 1, sw se ne 8-27-6	100	3149
Empire, Worrell 5, se nw se 12-27-7	175	2741
White Eagle, Gray 1, se lot 2, 31-26-8	*	2790
Cowley County—		
Marland, Graham 4, nw se sw nw 15-32-4	50	3275
McMahon et al, Graham 1, sw nw ne 15-32-4	100	3296
McNabb et al, State Land 1, se ne nw 15-32-4	400	3268
Reynolds et al, Garrison 1, se sw 28-30-8	*	....
Elk County—		
Superior, Welch 1, sw ne 29-31-11	10	2267
Empire, Duby 12, sw nw nw 32-22-11	180	1905
Texas Co. et al, Edwards 4, sw nw sw 16-23-11	80	1979
Edwards 4 "E", nw sw sw 16-23-11	100	1980
Edwards 3, sw 16-23-11	*	2030
Harwood et al, Ladd 1, ne nw nw 35-25-8	50	2464
Abel et al, Barnard 1, sw se nw 4-23-10	*	2477
Hamilton 1, sw ne 32-24-12	*	....

Company, Well and Location	Initial Production Bbls.	Depth
Winona Bennett 1, sw 33-27-11.....	*	1987
Lyon County—		
Theta Jones 9, sw ne nw 30-21-10..	10	2292
Sumner County—		
Roxana, Mason 4, sw se nw 25-31-2.	400	1900
Marion County—		
Schock et al, Novak 1, c ne se 8-18-4	*	2550
Rice County—		
Sand Creek, Jacobson 2, ne sw nw 2-21-6	*	3450
Russell County—		
Kettle et al, Kistler 1, sw ne nw 6-14-12	*	3400

CALIFORNIA

Alamitos Heights—		
J. Paul Getty, Cleaver 1 3500		4725
Huntington Townsite—Byron Oil Co., Ahlburg 9, wo	175	3917
Fred Reuther, test	300	3938
Long Beach—		
Delaney Pet. Corp., 2	695	5389
California Pet. Corp., Foster2, No. 3	125	3120
Baldwin Hills-Inglewood—		
Associated Oil Co., Vickers 8, wo	90	2538
Dominguez—		
Shell Co., Reyes 36	300	3988
Torrance—		
Main Oil Co., Torrance	40	3510
Santa Fe Springs—		
Union Oil Co., Bell 27	260	2700
Brea-Richfield—		
California Pet. Corp., Cons. 13, wo	215	2937
Richfield 6	207	4497
Midway District—		
Honolulu Cons. Oil Co. 86	320	2875
Standard Oil Co. 46	125	4515
21	75	3430
25	150	2840
8	75	2916
Poso Creek—		
Barnsdall Oil Co., Fortine 1.....	*	3005
Cat Canyon—		
Brooks Oil Co. No. 7, wo.....	150	2782

MOUNTAIN STATES

WYOMING

Salt Creek—		
Ohio Oil Co., 25, 12-39-79	¶	2218
Wyoming Oil Fields Co., 36, se 23-40-79	100	1057
Midwest Oil Co.'s 36L, se 27-40-79	1275	2547
33L, ne 23-40-79	750	2500
3L, nw 2-39-79	850	2509
18, ne 35-40-79	50	1092
Wyoming Asso. Oil Corp., 19L, ne 26-40-79	100	1955
Big Muddy—		
Continental Oil Co.'s 43H, 9-33-76.	80	3165

COLORADO

Yuma County—		
Yuma Valley Oil Co., 1, 11-1-44...	*	3274
Florence—		
Oliferous Oil Co., 1L, 36-18-70	*	1850

NEW MEXICO

Eddy County—		
Empire, 3AS, 2-18-27	40	1615
Prairie 1K, 10-17-31	50	3400

MONTANA

Kevin-Sunburst—		
California Pet. Co., 4, se 28-35-2 ...1000		1470
"56" Oil Co., 22, ne 32-35-1	100	1460
Ski-U-Mah Oil Co., 3 nw 33-35-1 .	50	1480

EASTERN STATES

PENNSYLVANIA

Bradford County—		
South Penn Oil Co., Bingham 533, tract 88	2	....
Bingham 150, tract 80.....	2	....
Bingham 400, tract 77	2	....
Bingham 576, tract 119	3	....
Fee 110	4	....
Fee 111	2	....
Whipple 133	2	....
Kendall 61	2	....
Jones 222	2	....
Jones 223	2	....
Kane 111	2	....
Culbertson 60	3	....
U. Keating 1	2	....
Clark-Kennedy 111	2	....
Middaugh 53	2	....
Forest Oil Co. Taylor 4	2	....
Taylor 5	3	....
Taylor 6	3	....
Taylor 7	2	....
Fisher 5	3	....
Fisher 6	2	....
Fisher 7	3	....
Fisher 8	4	....
Hazlewood Oil Co. Tract 27, lease 130	3	....
Bingham 130	2	....
Piper & Lloyd, Ekas 29	3	....
Ekas 30	2	....
Associated Prod. Co., Bingham 568, tract 385	3	....
Bingham 568, tract 387	3	....
Kepner Oil Co., Kepner 2.....	12	....
J. W. Kaufman, Rounds 3	17	....
R. A. Stambauch & Co., Rasey 1 ...	5	....
McDowell & Andrus, Bingham 296, tract 110	4	....
L. H. Smith & Son, G. H. Stock 1	3	....
Lincoln 2	3	....
Dana & Dana, Dana 46	4	....
S. H. Elder & Co., Elder 21	4	....
Mix Creek Oil Co. 20	2	....
21	2	....
Venango County—		
Titusville Trust, Emery 10	7	....
Emery 11	3	....
Alum Rock Gas Co., Shawkey 4....	7	....
J. Diamond & Co., Diamond 5.....	2	....
Surety Oil Co., Staub 11	4	....
T. McLaughlin, McLaughlin 2	¶1	....
Butler County—		
J. Hartman, Sterrett 1 . .....¶1¼		....
Hugh Iman, Iman 2 . .....¶1¼		....
Donaldson & Co., Gibson 1	2	....
McCann & Co., Wilson 1	2	....
Greene County—		
Nat. Gas Co. of W. Va., H. & C. Smith 6	15	....
Consumers Fuel Co., Alfred Rutan 3	5	....
Manu. L. & H. Co., S. Yost 1....	¶2	....
Clarion County—		
A. D. Shorts & Co., Kahle 5.....	¶1	....
Alum Rock Gas Co., Groner 2....	2	....
J. W. Baker, Beck 1	*	....
Washington County—		
Percy Tombaugh, Phillips 1	5	....
Crawford County—		
Reitze & Braymer, Kuhns 3	3	....

NEW YORK

Allegany County—		
C. M. Lippert & Co., Lippert 3 ..	3	....
McKean Nat. Gas Co., McKean 1.	12	....
N. V. V. Franchot Tr. Fries 3 . ..	7	....
Franchot 2	5	....
Meridian 1	5	....
Empire G. & F. Co., Empire 6	4	....
Empire 7	3	....
M. J. Crowley & Co., Coast & Co. 3	3	....
McDivitt & Co., McDivitt 6	7	....

WEST VIRGINIA

Calhoun County—		
Hope Cons. & Ref. Co. J. P. Knight 1	8	....
L. C. Garrett 1	*	....
Weaver & Lewis, Mary Kelley 1....	¶2	....
Martin Crowley, Sommers 1	*	....
McIntosh & Scott, Starch 2	¶2	....
White Pine O. & G. Co., Frames-Gainer 1	¶¼	....
Cambridge Gas Co., E. J. Elkins 1	¶¼	....
Braxton County—		
Hope Nat. Gas Co., C. Cross 1, 2	*	....
Phil. Gas Co., Rollyson 1	*	....
H. C. Zogg & Co., Lee Balknap 1	¶2	....
Clay County—		
Virginian G. & O. Co., Lockhart 8	10	....
M. Brown 2	5	....
Ohio Fuel Oil Co., C. P. Reed 1..	¶¼	....
Boone County—		
G. L. Cabot, Arbograst 2 .....¶1½		....
Federal Coal Co. 17 .....¶1½		....
United F. G. Co., Horse Creek 8..	¶¼	....
Lincoln County—		
Columbia G. & E. Co., Sweetland 532	¶1	....
Cambridge Gas Co., C. Carnes 1..	¶1	....
L. R Sweetland, A. Burns Hrs. 16	¶1	....
Cabell County—		
David Gas Co., Dave Miller 1.....¶1½		....
W. H. Curtley & Co., W. E. Martin 1 . .....¶1¼		....
Marshall County—		
Man'frs L. & H. Co., Howard Hrs. 3	¶2	....
F. L. Reed 2	*	....
Roane County—		
United Fuel Gas Co., Carper 2....	5	....
Gilmer County—		
Carnegie Nat. Gas Co., Rhodes 1..	¶2	....
Satterfield & Co., Maxwell 2	¶2	....
Wetzel County—		
Manu'frs L. & H. Co. J. Henrick 1	¶2	....
Lewis County—		
Krouse Bros., Krouse Bros. 1.....	¶¼	....
Monongalia County—		
J. A. Phillips & Co., Wright 1....¶2¼		....

KENTUCKY

Ohio County—		
J. C. Miller, Ambrose Hrs. 6.....	200	711
Rex-Pyramid Oil Co., S. Ambrose 3	175	671
Ohio Oil Co., R. Taylor 1.....	50	708
Wood Oil Co., Ira Wallace 1	10	717
Barren County—		
A. W. Ziegler & Co., Darter 7....	20	....
Hunt, Mitchell & Co., Taylor 4..	20	....
Sinning, Merrifield & Co., Hale 3..	8	....
Sanson, Norris & Co., Browning 3..	*	....
Norris Bros., Jones 2	10	420
Wood Oil Co., Unknown 1	*	....
Cumberland-Monroe Counties—		
McClintock, Reed & Co., Hughes 4	25	....
Hughes 5	10	816
Oil Fork Dev. Co., J. Finley 2....	10	422
S. K. Baird & Co., Elliott 1.....	2	....
Clint County—		
McClintock, Reed & Co., Pierce 6..	150	....
Edmonson County—		
Green River Oil Co., J. Poteet 1..	10	1150
Warren County—		
Zickers Drilling Co., Bryant 1....	20	475
Wayne County—		
John Dillon, Eli Phipp 1.....	35	....
Kennedy, Taylor & Co., Stinson 5..	2	....
Johnson-Magoffin Counties—		
Sanford & Outram, Whittaker 1 ..	5	....
Andy Lick Oil Co., Gullett 1	5	....
Floyd-Knott Counties—		
Distill-Martin O. & G. Co., Martin 1 . .....¶2½		....
F. R. Hayes 1 . .....¶2½		....
Daviess County—		
Leeper Oil Co., C. D. Veach 2....	5	....
Washington County—		
Chas. Nolan, S. Horn 7	*	907
Noble County—		
Washington-Noble O. & G. Co., E. Way 1	*	4315

CENTRAL OHIO

Holmes County—		
Kemrow Co., A. C. Fites 1.....	¶3	....
Louis Coon 2	125	....
Ohio Oil Co., Smitheiser 4	50	....
East Ohio Gas Co., Miller 3	30	....
Licking County—		
S. C. Brown, Boughman 3	28	....
Wehrle Interests, Vogelmier 1	¶¼	....
Edward H. Everett Co., Haynes 4..	65	....
Robinson & Co., Olive Lees 1....	¶¼	....
Athens County—		
Biddle O. & G. Co., J. E. Biddle 7	7	....
J. A. Ronshausen, J. A. Cassett 1..	*	....
Some Oil Co., Childrens Home 2..	5	....
Hocking County—		
Sure Strike Oil Co., Stevens 1....	*	....
Cohen & Co., E. Pummel 1	*	....
Rice & Co., Hite 1	*	....
Meigs County—		
Ohio F. Sup. Co., Easterday 3....	10	....
Penn. Berea Oil Co., Capeheart 3..¶1½		....
Guernsey County—		
Wiser Oil Co., National Coal 1 . ..	200	3677
Fairfield County—		
Hope Cons. & Ref. Co., Deam 1....	4	....
Knox County—		
Arknasas F. O. Co., Hall 5.....	*	....

NORTHWESTERN OHIO

Wood County—		
John Geldin & Co., Geldin 7.....	10	1254
Evans & Walden, Walden 2	3	1400
Shelby County—		
Ohio Oil Co., T. Goffena 5	7	....
Sandusky County—		
Ohio Oil Co., J. H. Myers 9	6	1557
Lucas County—		
Waterville G. & O. Co., King 1....	¶¼	....

INDIANA

Daviess County—		
Geiger & Co., S. Swan 1.....	*	1626
F. Swan 1	*	1400

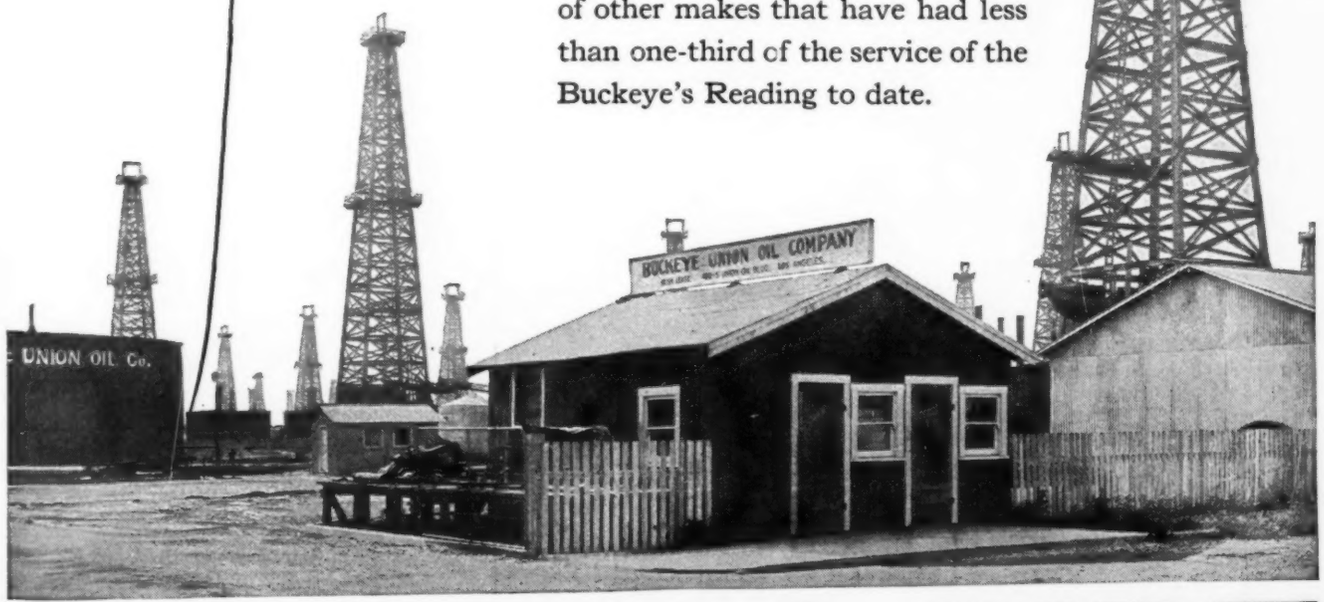
"No Fishing!"

READING CASING *is used in these 4500 foot holes*

READING genuine wrought iron tubing has been used exclusively in producing the Irish Lease of the Buckeye Union Oil Company at Santa Fe Springs, California. In every well but one Reading 4¾"—15 lb. California Casing was used for oil strings.

Not one fishing job has been experienced with either tubing or casing due to any failure of Reading Pipe in spite of the great depths from which the wells are produced, averaging 4500 feet.

Mr. Lou Dabney, Superintendent, stated that all of the original tubing and casing is still in use, whereas on nearby properties, operators have had to replace long strings of tubing of other makes that have had less than one-third of the service of the Buckeye's Reading to date.



READING PIPE

GENUINE WROUGHT IRON

READING IRON COMPANY DALLAS, HOUSTON, TULSA, SHREVEPORT, LOS ANGELES **READING, PENNSYLVANIA**

Say you saw it in The OIL WEEKLY

Company, Well and Location	Initial Production Bbls.	Depth
A. Tress 1	*	1150
Pike County—		
Ohio Oil Co., N. B. Coffman 6	10	993
Molton & Noble, Weathers 1	*	1162
Jay County—		
Ridenour & Co., A. C. Brown 1	35	1000
Vigo County—		
A. R. Morris, W. Riggs 1	¶¼	....
Sullivan County—		
G. G. Billings & Co., Huff 1	*	....

ILLINOIS

Wabash County—		
Green Oil Co., Breen 2	80	1398
Miller & Lengelsen, Keen 1	75	1624
Ellison & Co., Collison Hrs. 7	45	1462
Lawrence County—		
Big Four O. & G. Co., Seed 19	20	1846
Ohio Oil Co., J. B. Jett 4	5	1228
Crawford County—		
Dill & Co., Armstrong 1	*	....

MICHIGAN

Saginaw County—		
K. and M. Oil Co., George Bishop 1	25	1818
J. C. ReRed 1	20	1825
Wells-Schmidt Co., Whittier 3	20	1826
Saginaw Pros. Co., Draper 1	20	1825
Mershon Vinyard 2	20	1826

ARKANSAS

Nevada County—		
Autrey Oil Co., McKinney 2, 1-14-21	30	1210
Ouachita County—		
Gulf., Umsted A-25, 33-15-15	123	2364
Keever et al, Hicks 2, 27-15-16	7	2015
Magnolia, Hamilton Smith 4, 36-15-16	7	2277
Union County—		
Humble, Goodwin 6, 20-17-15	15	2200
Lion O. R. Co., Graves 6, 3-16-15	35	1966
Murphy 2, 9-16-15	240	2316
Marine Oil Co., Thompson B-1, 10-18-13	¶60	2707

LOUISIANA

Bossier Parish—		
La. Oil R. Corp., Blanton 1, 23-23-12	¶30-1500	3091
Caddo Parish—		
Lewis Oil Corp., Caddo M.L. 9, 24-22-15	15	1070
Standard, Stiles 177, 33-31-16	45	1833
Texas Co., Curtis 6, 14-20-16	900	2209
Harrel 56, 4-21-16	15	2408
Woodley Pet. Co., Muslow 3, 32-21-15	15	1691
Red River Parish—		
Texas Co., Brinkerhoff B-35, 30-13-10	50	2528
Richland Parish—		
Ruston Drlg. Co., O'Neil 1, 35-17-6e	¶4	2508

SOUTH LOUISIANA

Vinton—		
Gulf, Vincent 32 (wo)	*	2500
67 G. & N. G.	300	2400
Vinton Pet. Co., Gray 59	50	2450
Lockport—		
Vacuum-Gulf, Miller 7 (wo)	2000	4400
8	2500	4400
4 Bordages	200	4900

TEXAS

GULF COAST

Spindle Top—		
Gulf, Gladys 223	15	850
Batson—		
S. R. Buchanan, Millholme 92	40	1300
Goose Creek—		
Humble, Gaillard-Penn 32	*	4600
Gaillard-Penn 31	*	3000
Gulf Coast Oil Corp., Gaillard 24	35	2790
Hull—		
Gulf, Phoenix Development 83	835	3350
Pierce Junction—		
Rio Bravo, P. F. Settegast 2 (wo)	1000	4460
Gulf, E. R. Taylor et al 20	75	3800
W. H. Jones 2 Fee	1000	3400
Smith et al, Parsons 1	100	4250
Big Creek—		
Gulf, T. W. Davis 38	2500	4000
T. W. Davis 22 (wo)	4371	3450
Sour Lake—		
Gulf, M. J. Ebberts 4	10	3900
H. S. Thomson 2	75	3000
Sun, F. H. Carpenter 1	185	4550
High Island—		
Gulf, E. Smith 7	200	2600
Boling—		
Weed and Gale, Bay 7	600	430
Orange—		
Tillery Oil Co., State 2 (wo)	500	3300
Brownie-Babbett McLean 12 (wo)	165	4000
Ryvade, State "B" 2 (wo)	1160	3900
Gulf Coast Oil Corp., Leon 5 (wo)	125	3300
Humble, Winfree 6 (wo)	120	4000
Barbers Hill—		
Moody Oil Corp. and Mills Bennett Fee 5	1200	4175
Blue Ridge—		
Gulf, West-Schenck 8	75	3900
9	900	3150
Batson—		
Paraffine Oil Co., Heywood 34	15	1075
Saratoga—		
Sun, Texas Crude 173	6	725

ARCHER COUNTY

Arco Oil Co. & Young, Parkey 1	*	1765
American, et al, Turbeville 13	*	1525
Barnsdall & Trahan, Perkins 1	40	1747
L. T. Burns et al, Jackson 1-A	*	1610
Turbeville 5-E	95*	1478
Turbeville 6-E	200	1482
Beasley et al, Abercrombie-Taylor 1-B	*	1450
Kentucky Oil Corp. & Roxana, Chancellor 1	*	1527
Kimmell-Dillard et al, Mangold 1	*	1900
Marland & Kentucky Oil Corp., Wilson 1	*	1501
Petroleum Prod. Co., Turbeville 5-C	70	1472
Rayzor et al, Swischer 1	*	1455
Roxana, Abercrombie-Taylor 17	30	1370
Simms Oil Co. & L. T. Burns, Turbeville 10-A	85	1469
Sun Oil Co., Green 3-B	15	1104
Western Oil Corp., Prideaux 1	80	660

BIG LAKE

Texon O. & L. Co., University 8-A	†	2720

BROWN COUNTY

Amerada Pet. Corp., J. H. Fry 25	160	1313
Anna Belle Oil Co., Kilgore 2	35	1340
Kilgore Bros. 9	*	1410
Barbara Oil Co., Willis 5	*	1610
Bradstreet et al, Stout 8	150	1211
J. K. Hughes Dev. Co., Shore 1	1750	1322
Humble, Armstrong 10	10	1240
Hickman 11	3	1285
Loofborrow et al, Humphrey 1	*	1615
Jas. A. McKenna et al, Shore 1	2480	1320
Foster 17	†	1020
McLester Oil Co., Wooldridge 20	35	1230
Mexana Oil Co., Eddington 4	*	1365
Prairie, Gaines 1	*	1465
Price & Daniels, Selvidge 1	*	1203
Rex-Tex & Py-Tex Oil Co., Fry 9	110	1309
Shoup Jr. et al, Byler 6	10	1291
Sinclair, J. H. Fry 22	655	1317
Texas Co., R. M. Lowe 37	500	1338
R. M. Lowe 38	840	1336
Tidal Arledge 2	75	1306
Wentz Oil Corp., Shore 10	110	1338
Shore 12	†	520

BURKBURNETT

C. P. Sheldon et al, Frankl 4-A	50	1663

CALLAHAN COUNTY

Beams & Kingwood, Jackson 1	*	1513
Deener et al, Bryan 1	*	1645
Miss. Valley Oil Co. (Tidal) Sealel	*	2835
Oklavania Oil Co., Hays 1	*	3205
T. G. Shaw et al, Miller 1	100	1695

CARSON COUNTY

Delmar Oil Co., T. D. Lewis 1,	140	3190
J. K. Hughes Dev. Co., Percival 1	250	3275
Roxana, E. F. Bryan 5-A, shot	275	3250
Garner 2, shot	650	3160
Texas Co., C. A. Noel 1	¶25	2759

CLAY COUNTY

Empire Hilding Corp., Barry 2	*	830

COLEMAN COUNTY

Cheney et al, Overall 3	¶14¼	2220
Rot & Faurot et al, Sealy-Smith 1	¶7	2582

COMANCHE COUNTY

Gracey et al, Mason 1	*	1188

CRANE COUNTY

Carl Cromwell & Frank Pickrell, University 1	2200	2900
Gulf, University 4	1075	3083
Humble, University 4	2450	2930

COOKE COUNTY

J. K. Hughes Dev. Co., Embry 6	15	1212
Lynch-Stahle-Burris, Walling- Marty 1	¶6¼	1191
McElreath-Suggett et al, Fischer 1.	*	2005

ELECTRA

Magnolia, Lute Ancell 1	*	2375
Ryan Pet. Corp., G. E. Nance 91	*	1844
Texas Co., Waggoner 322	55	1750
Texas et al, Waggoner 1	70	1282

EASTLAND COUNTY

Corzelius Bros. et al, Terrell 1	*	1530
Griesedeick et al, Persons 1	*	1708
T P Coal & Oil Co., L. C. Norwood 33	3	3471

GRAY COUNTY

Magnolia, Fee 1, shot	200	3004
Phillips, H. M. Davis 2	100	3118
H. M. Davis 3	200	3129
H. M. Davis 4	150	3153
Texas Co., H. M. Barrett 1	¶30	2776
Wilcox O. & G. Co., Worley-Reynolds 20	25	3021
Worley-Reynolds 21	5	2952

HUTCHINSON COUNTY

Bain et al, J. L. Moore 1, shot	550	3125
Currie Bros. & J. R. Phillips, Smith 4, shot	250	2980
Magic Eighty Oil Co., Kingsland 1, shot	35	3000
Marland & McMan, Merchant 1	165	2865
Phillips, Johnson-Gordon 8	80	2937
J. A. Whittenburg-Patton 20	300	2905
Whittenburg-Gibson-McMillan 5, shot	175	2918
6-A, shot	140	2915
7, shot	800	2900
11, shot	200	2908
Prairie & Phillips, Johnson 5-A, shot	240	3039
Skelly, Whittenburg 6-A, shot	20	2816

HOWARD COUNTY

Comet Pet. Co., H. R. Clay 1	65	1830
Dixie Oil Co., H. R. Clay 1	40	1963
Magnolia, Owen-Chalk 7-A	35	1615

JONES COUNTY

Mid-West Explo. Co., Thornton 3	200	2529
Thornton 4	185	2514

K-M-A AND IOWA PARK

R. Cook et al, Throckmorton 3	*	1965
Cooper & McLaughlin, Love 4	*	1833
L. P. Hammond et al, Boyd 2	10	707
Boyd 3	*	705

MITCHELL COUNTY

Atlantic Oil Prod. Co., Womack 8	35	3075
California Co., Handley 3	90	3080

MONTAGUE COUNTY

Barnsdall, Howard 5	20	1386
Cato Oil Co., Rolls 12	40	873
Gulf, Howard-Dennis 9	15	1403
Crownover 1	*	2030
Pure, Crowe 4	35	898
E. L. Smith Oil Co., Maddox 6	50	898

SHACKELFORD COUNTY

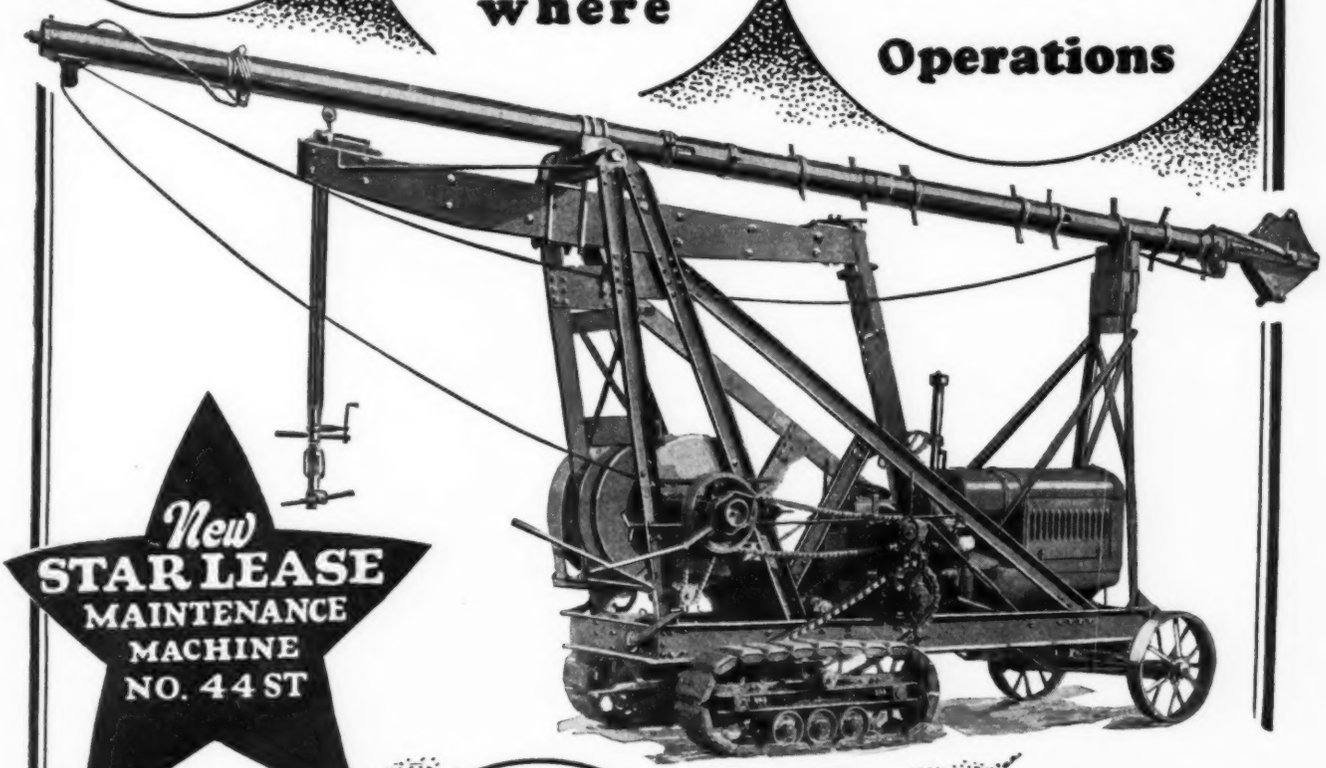
Godfrey Oil Co., Hill 1	*	803
H. G. Gwinnup et al, Poindexter 1, (Sec. 61)	*	1515
Independent O. & G. Co., Davis 4	25	1240
Lee-Dingee et al, Meyer 3	*	1130
Magnolia, Moberly 4	*	1970
Miss. Valley Oil Co., Manley 1	*	2503
Osage Oil Corp., Hill 1	†	690
Rose et al, Moberly 2	25	1393
Southern Pet. Explo. Co., Dyer 4	40	910
White Eagle, Gorsuch 1	40	1577

(Continued on page 99)

Cuts Cleaning-Out Costs

Crawler Wheels Take It Anywhere

Three Speeds Forward and One Reverse for All Operations



New **STAR LEASE MAINTENANCE MACHINE NO. 44 ST**

Moves Assembled, Quickly Rigged-Up

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Runs Well on Gasoline, Kerosene or Natural Gas

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City State Oil Weekly

Magnolia Pipe Line Company's Movement of Crude In March Below February Average

Dallas, Texas.—Magnolia Pipe Line Company's daily average crude runs during March from fields in Oklahoma, Texas, Arkansas, Louisiana and Kansas declined slightly below the high mark established in February. Daily crude runs during March averaged 119,530 barrels, or 919 barrels below the record established for the company during the previous month, with Oklahoma field connections accounting for the decline. Total crude runs for March amounted to 3,705,415 barrels, as compared to 3,372,577 barrels during the short month of February. Magnolia's daily production in the five states amounts to about 85,000 barrels from about 6000 oil wells.

The Greater Seminole field in Oklahoma is the largest source of crude supply for Magnolia, but daily average crude runs from this area dropped 2048 barrels during March as compared to the runs made the month previous. Magnolia ran 741,926 barrels of high gravity crude from the Seminole field, or a daily average of 23,933 barrels during March. Small increases in runs from other Okalhoma fields enabled Magnolia to average 61,589 barrels daily from this State during March. Since the quantity of oil greatly exceeds the capacity of the two eight-inch lines used in transporting crude to refineries and tank farms in Texas, the company was forced to store oil in Oklahoma at the rate of 21,120 barrels daily, thereby boosting crude stocks in this state 664,705 barrels. Magnolia held 4,585,518 barrels of crude stocks in Oklahoma at the close of March.

A loss of 1790 barrels in daily average runs from the Texas Panhandle district during March was more than offset by increased runs from Spindletop and other fields in Texas, thereby affording Magnoila a daily average of 46,817 barrels for the month in Texas, or a gain of 723 barrels on daily average. Crude runs by Magnolia in the Panhandle averaged 10,784 barrels in February and 8994 barrels in March. Magnolia has accumulated approximately 3,725,000 barrels of crude stocks in the Panhandle since March 17, 1926, and will start moving this oil to market next week via a 10-inch trunk line, which was built jointly with the Gulf Pipe Line Company.

Having a surplus amount of crude as compared to current refinery requirements, Magnolia shipped 755,003 barrels of crude via 11 tankers during March to the Standard Oil Company of New York. Tanker shipment of fuel oil during March reached the highest level attained since January, with a total of 18,708,352 gallons loaded for coastwise and foreign movement during the past month and 17,955,395 gallons in February. Water movement of refined oils (gasoline, kerosene, distillates and lubes) amounted to 45,967,092 gallons in March. Magnolia's water shipments of fuel oil, refined oils and crude for the past three months follow:

	Fuel Oil Gallons	Refined Oils Gallons	Crude Bbls.
January	19,380,973	37,607,750	493,055
February	17,955,395	32,792,030	631,543
March	18,708,352	45,967,092	755,003

Total crude runs made by Magnolia Pipe Line Company from fields in Oklahoma, Texas, Arkansas, Louisiana and Kansas during February and March follow:

Field—	February Totals	March Totals
Seminole District	727,464	741,926
Wewoka-Cromwell	297,232	317,169
Healdton	210,759	273,670
Cushing	211,502	208,533
Hewitt-Graham	136,642	161,637
Yale	63,037	69,931
Duncan	44,572	55,396
Augusta (Kansas)	42,757	49,571
Burbank	40,628	44,449
Cement	23,386	26,781
Walters-Beaver Creek	8,404	9,763
Totals, Okla. and Kan.	1,806,383	1,958,826
Luling	403,693	445,500
Panhandle District	301,965	278,824
Mirando District	126,271	131,931
Electra	95,920	119,713
Gulf Coast-Spindletop	31,191	94,856
Archer County	77,422	85,835
Burburnett	71,192	80,526
Mexia-Wortham	41,886	52,080
Lytton Springs-Lockhart	48,570	51,872
Corsicana-Powell	24,189	31,109
Desdemona-Comanche	19,878	22,227
Ranger-Olden	13,681	15,841
Howard-Mitchell Cos.	10,733	15,075
Stephens County	9,551	11,508
Corsicana (Heavy)	7,685	7,107
Petrolia-Clay County	4,929	5,365
Thrall-Williamson Co.	1,431	1,290
Panola County	267	602
Coleman County	172	75
Totals for Texas	1,290,626	1,451,336
Smackover	136,747	142,392
El Dorado	27,762	31,329
East El Dorado	1,775	3,386
Totals for Arkansas	166,284	177,107
Cotton Valley	35,088	40,092
Pine Island	37,277	38,063
Bull Bayou	33,195	35,193
Haynesville	3,804	4,798
Totals for Louisiana	109,284	118,146
Totals for five states	3,372,577	3,705,415

Mexico's 1926 Output Lowest Since 1919

Washington, D. C.—Petroleum production in the Tampico field last year totaled but 88,995,591 barrels, a decrease of 30 per cent from the 1925 production of 115,784,947 barrels and the lowest total for any year since 1919, despite unsurpassed drilling activity, it is shown by reports received at the Department of Commerce from the vice-consul at Tampico, Mexico.

As a result of the greatly reduced production, Tampico's prosperity, which has diminished steadily since the boom days, has virtually disappeared, the population of the city decreasing to slightly over 75,000. One refinery closed during the year, and the output of the others is now considerably below capacity, it is stated.

The incursion of salt water into every producing area of the district was largely responsible for the failure of new drilling efforts and for the diminution or complete failure of many wells previously producing.

Practically all of the major operating companies of the district showed a loss in production; in the case of two of the principal companies these losses approximate 50 per cent of their 1925 output. Of the important producing companies only two increased their production, one of these being the National Railways of Mexico, which produced 2,307,908 barrels in 1925 and 4,232,470 in 1926. The serious losses in production sustained by the principal companies occurred chiefly in the north fields, centering around Tampico in the states of Veracruz, San Luis Potosi and Tamaulipas, and it was in these fields that the incursion of salt water was most destructive, a great proportion of the wells brought in as producers being pinched in or shut down entirely after a few days flow. In the south field, or light oil district, individual producers, with the exception of one large company, did not experience such heavy losses in production.

With the exception of the operations in the Altamira field, drilling during 1926 was confined almost entirely to proven territory in the north and south fields, and the completion of 853 wells during the year indicates the efforts to sustain production. Only 257 of these wells were producers, compared with 241 producers out of 796 completions in 1925, 259 out of 732 in 1924 and 217 out of 471 in 1923. A discouraging proportion of the successful completions were short lived.

In line with the steady decline in production, stocks of petroleum in storage in the district decreased 33 per cent from 22,371,987 barrels of all classes January 1, 1926, to 15,043,883 on January 1, 1927, the lowest reserve stocks in many years. Petroleum in storage on the Isthmus of Tehuantepec, the only other producing region, amounted to 836,247 barrels on January 1, 1927.

Of the total 1926 production, exports took 82,587,681 barrels, of which amount 64,913,406 barrels were shipped by American companies and the remainder by the Dutch Shell interests. The United States received 55,364,454 barrels, or more than 67 per cent of the total exports, which does not include shipments to the Canal Zone and Porto Rico.

Muskogee Lease Sale

Muskogee, Okla.—Seventy tracts involving 7187 acres of restricted Indian lands of the Five Civilized tribes were sold at the auction here April 1. The leases brought an average of $1.98 an acre.

Axelson Machine Co.
Sucker Rods, Pull Rods, Plunger Working Barrels (Pumps) etc.

Beaumont Iron Works Company
Dreadnaught Rotary Equipment, Water-Cooled Drawworks, Pumping Hoists, Traveling Blocks, etc.

Carbic Manufacturing Co.
Acetylene Gas Generators and Welding Equipment

Donovan Boiler Works
Oil Country Boilers and Tanks.

Frick-Reid Service Belting
Rubber Covered and Friction Surface.

Jensen Bros. Mfg. Co.
Pumping Jacks.

National Transit Pump and Machine Co.
Power and Steam Pumps.

J. P. Ratigan
Grips, Clamps, Beam Hangers.

Joseph Reid Gas Engine Company
Gas and Oil Engines, two and four-cycle, Band Wheel and Direct Drive Pumping Powers.

Rossendale Reddaway Belting & Hose Co.
"Camel Hair" Belting, Belt Clamps.

Whitlock Cordage Co.
Manila Cordage, Bull Ropes and Cat Lines.

Lapweld and Seamless Tubular Goods

Walworth Company
Valves, Fittings and Tools for Steam, Water, Gas, Oil and Air.

WHITLOCK

—or what makes good rope good

EVERY ONE understands that Manila is the best fibre for cordage, but few stop to consider that there are different grades of Manila. If you want to know how fine and strong good Manila can be, examine the Whitlock Cordage in any Frick-Reid Store.

Another important point is the skill used in manufacturing. Cordage must be made to resist whatever forms of wear are peculiar to the service it will be called on to render.

Cordage can be so skillfully made and so carefully lubricated that it works as a unit, with minimum outside wear. Whitlock is a revelation to any man accustomed to ordinary rope.

And speaking of lubrication—Whitlock Cordage is never loaded. Sometimes it costs more per pound than other rope, but you get more yardage, which makes it cheaper after all.

The next time you buy rope, buy Whitlock. You'll like it.

FRICK-REID
SUPPLY CO.

Tulsa, Okla., Pittsburgh, Pa.
West of the Mississippi, Store Everywhere

WILDCATS FROM ALL SECTIONS

SOUTHERN CALIFORNIA

Athens—Union's Mosier, to abn 5690 ft.

Bandini—Pan-American Pet. Co.'s Bandini 1, dr 5617 ft.

Boyle Heights—Haskell M. Green's P. A. S. F 1, sd 1400 ft.

Claremont—O. & G. Co.'s 1, sd 1130 ft.

Coyote-West — Bastanchury Ranch Co.'s 1, dr 4388 ft.

Davidson City—Cal. Well Drlg. Co.'s 1, dr 5156 ft.

Dominguez—Dominguez Extension Oil Co.'s 1, dr 5528 ft.

Downey—C. F. Ackers' Downey 1, stg 367 ft.

Eagle Rock—Calwin Oil Co.'s 1, dr 6136 ft.

El Segundo—So. Calif. Drlg. Co.'s Matteson, dr 4734 ft.

Gardena—Circle O. & G. Co.'s 1, stg idle 3360 ft.

Hawthorne—Winwell Oil Co.'s Dome 1, sd 5586 ft.

Irvine—Calny Oil Co.'s Irvine 1, sd 4247 ft.

Lancaster—John B. Harding's 1, sd 1860 ft.

Maywood—Magnolia Pet. Synd's 1, sd 4452 ft.

Newhall—Geo. W. Johnson's Wickham 1, sd 2840 ft. W. W. Stabler's Castaic 1, fsh 3408 ft. Temple-Lefevre's Castaic 1, sd 2107 ft.

Palos Verdes — Pet. Sec.'s Weston 1, dr 1300 ft.

Potrero—Associated's Cypress 1, stg 4450 ft. General's Smith 1, dr 4443 ft.

San Fernando—Standard's University 1, dr 5760 ft.

San Jose Hills—D. & B. Oil Co.'s Amar 1, stg. 3600 ft.

San Juan Capistrano—Norswing & Halbertson's 1, sd 4060 ft. O. K. Carr's 1, sd 2414 ft.

Telegraph Canyon—Quadra Pet. Co.'s M. J. & M. 1, stg. 4210 ft.

Topango Canyon — Standard's Austin 1, dr 2489 ft.

Riverside County—Corona O. & G. Co.'s 1, sd 1550 ft. Spindletop Oil Synd.'s 1, plugging 10 in. 2650 ft.

San Bernardino County — Arrowhead Dev. Co.'s 1, prep to abn 1250 ft. Burgess-Goodale Riggins' Comm. 1, plug at 2400 ft. Como Oil Co.'s Cajon 1, sd 1380 ft. Colton Terrace Oil Co.'s 1, sd 1320 ft. Del Rosa Oil Co.'s 1A, stg cmt 705 ft. Hesperia O. & G. Co.'s 1A, stg 3312 ft. H. &. P. Oil Co.'s Ranger 1, stg 2103 ft. McCarty 1, milling on disc 1260 ft. Western Pacific Oil Co.'s 3, fsh 2900 ft.

San Diego County — Cardiff Oil Corp.'s Turner 1, dr 2516 ft. Oceanside Oil Co.'s Dunn 1, sd 3210 ft. Randall-McGregor's 1, stg 1677 ft. Torrey Pines Oil Co.'s 1, sd 428 ft.

NORTHERN CALIFORNIA

Completions

Company, Well and Location	Initial Production Bbls.	Depth
San Mateo County—		
Mid-State Oil Co. 3.....	14	2105
La Honda Oil Fields, 2	25	1160

KERN COUNTY

Antelope Plains—W. H. Davis' 1, rep. 2915 ft.

Bakersfield—Pacific-Eastern Prod. Co., 1, dr 3988 ft.

Belridge—Standard Oil Co.'s 1, material on ground. Zurich Oil Co.'s 1, dr 150 ft.

Buttonwillow—Milham Explo. Co.'s 1-A, sd, cmt, 4205 ft; 1, bldg rig.

Comanche Point—Kern 29 Oil Co.'s 1, sd 2440 ft.

Delano—Chanslor-Canfield's 1, dr 810 ft.

Devils Den—Marathon Oil Co.'s 1, fsh 4390 ft. Midway Northern Oil Co.'s 1-A, dr 150 ft. Robbins Oil Co.'s 1, sd 2280 ft. R. H. Sayers' 1, dr 570 ft.

Elk Hills—McAdams Pet. Co.'s 1, dr 3921 ft.

Gould Hills—A. J. Bomke's 1, sd 610 ft. Carolina-Western's 1, sd 1197 ft. Mendocino-Midway Oil Co.'s 1, sd 2930 ft. Rhoads Oil Co.'s 1, sd 1485 ft. L. E. Wastrich's 1, co 1685 ft.

McKittrick—Abbott Pet. Co.'s 1, dr 1991 ft. Lacy-Esper Pet. Co.'s 1, sd 3260 ft. McKittrick Hills Co.'s V-2, dr 2670 ft. Sisson-Wisdom's 1, sd 970 ft.

North Midway—Bolsa Chica Oil Co.'s 1, sd 185 ft.

Rosedale—Muroc Dev. Co.'s 1, dr 290 ft.

Shale Hills—Huntington-Hawthorne's 1, sd 408 ft. Nelson & Mountford's 1, dr 2455 ft. Oildale Oil Co.'s 1, sd 558 ft.

Sunset—Fresno-Sunmaid's 1, sd 4200 ft. RR. H. Whisten's 1, rig.

Temblor Hills—Hovey Hills Co.'s 1, sd 2510 ft. Painted Hills Oil Co.'s 1, sd 500 ft.

Tehachapi-Mojave—Crusaders Oil Co.'s 1, sd 2284 ft. John B. Harding's 1, dr 669 ft.

Upper Kern River—Commerce Oil & Leasing Co.'s 1, sd 2508 ft.

Upper Poso Creek—Dr. Buchner's 1, dr 1010 ft.

FRESNO COUNTY

Clovis—Fresno-Madera Oil Co.'s 1, sd 3760 ft. W. W. Taylor's 1, sd 2100 ft.

Jacalitos Dome—Marland's 1, dr 3788 ft.

Wartham—Bald Mountain Dr. Co.'s 1, sd 905 ft. Progressive Oil Co.'s 1, sd 1105 ft. Raisin City's Fresno-United 1, sd 3911 ft.

KINGS COUNTY

Kettleman Hills—Ahlburg Gasoline Corp.'s 1, sd. Associated's 1, sd 2043 ft. Bolsa Chica Oil Co.'s 1, sd 2360 ft. Chanslor-Canfield's 1, dr 1220 ft. General's 1, fsh 3162 ft; 1, rig. Milham Explo. Co.'s 1, dr 887 ft. Hugh McPhail's 1, sd 1972 ft. So. Coalinga Oil Co.'s 1, dr 2015 ft.

VENTURA COUNTY

Camarillo—Standard's Camarillo 1, r 4926 ft. California Pet. Corp.'s Arniel 1, dr 1920 ft.

Casitas-Ojai—Miley Eplo. Co.'s Casitas 2, sd 568 ft.

Filmore—Sespe Oil Co.'s Smith 2, sd 4003 ft.

Hopper Canyon—Hopper Canyon Oil Co.'s 1, sd 5006 ft.

Moorpark—E. H. Parkford's Dabney-Lloyd 1, dr 2319 ft. Shell's Berlywood 1, dr 2557 ft.

Piru—Superior Oil Co.'s Pena 1, sd cmt 3176 ft.

Rincon—Montecito Oil Prod.'s 1, sd 3200 ft.

South Mountain—Ring Pet. Corp.'s Convers 1, dr 3770 ft.

Ventura Dist.—C.-C.-M. O. Co.'s Hobson 1-A, dr 5891 ft; Hobson 1-B, dr 3620 ft. Rancho Riva Oil Co.'s 1, dr 1368 ft. Rio Grande Oil Co.'s Canet 1, dr 4809 ft.

Santa Barbara County—Channel Oil & Dev. Co.'s 1, co 4820 ft. Hollywood Oil Corp.'s 1, sd 1280 ft. Summerland Oil Co.'s Becker 1, dr 2746 ft.

San Luis Obispo—Arroyo Grande Pet. Co.'s 1, co 4386 ft. Brinkman Oil Co.'s 1, sd 760 ft. Carlisle Oil Co.'s 1, sd 2680 ft. Indian Dome Oil Co.'s 1, sd 2680 ft. Waklin Pet. Corp.'s 1, fsh 2440 ft. Richfield Oil Co.'s 1, rigging rotary 100 ft.

Monterey County—Pet. Sec. Co.'s Anotzebehere 1, dr 1889 ft.

Tulare County—Ducor Dr. Co.'s 1, re-dr and co 3745 ft. J. W. Grafford's 1, fsh 2525 ft. Josephine E. Neame's 1, sd 2026 ft. Ozena Oil Co.'s 1, sd 2300 ft. Wm. C. Resser's 1, dr 1815 ft.

San Mateo County—Shell's Cowell 1, dr 2526 ft; Cowell 21, lcn.

Sonoma County—Shell's Murphy 1, dr 4789 ft.

Yuba County—Thos. M. Blake's 1, dr 1056 ft.

Yolo County—Yolo Land & Oil Assn.'s 1, dr 3160 ft.

KANSAS

Barber County—Vickers Pet. Co.'s et al Ott 1, swc 30-32-14, fsh 4506 ft.

Butler County — Burford & Brimm et al, Lambert 1, sw se sw 20-25-7, rig.

Cowley County—W. M. Neeley's Henderson 1, c nw ne 5-33-5, ts 1025 ft.

Lyons County—Culp et al's 1, sw se 26-19-10, dr 1400 ft. Cashe & Balliere, Stratton 1, se nw 32-20-13, dr 1200 ft.

Reno County—Sheldon et al, Hanfison 1, se nw 10-23-4, sd 4000 ft.

Russell County—Wilcox Russell, Wilson 1, se sw 14-12-13, ur 3631 ft.

Seward County—Wilson et al's Son 1, ne ne ne 14-33-33, sd 400 ft.

Marion County—Skow Bros.' Williams 1, ne sw 4-17-4, lcn.

McPherson County—McLaughlin et al's Rose 1-19-3, spd and sd. Merrian et al's 1, sw sw sw 29-18-2, td 2931-61 ft, fsh.

Sedgewick County—Marland et al's Schmidt 1, nw sw sw 5-28-1, rig.

OKLAHOMA

Completions

Seminole County—
Carter, Harjocke 1, ne nw 26-10-6.. 110 4320

Beckham County—Magnolia's 1, ne 21-9-23, lcn.

Caddo County—W. J. Hartley's Calbreath 1, se ne se 28-5-12, owd sd 3394 ft. J. A. Abernathy's 1, sw ne 23-5-12, dr 2302 ft.

Canadian County—T. B. Slick et al's Pazourock 1, sw ne 29-13-5, dr 4550 ft.

Cleveland County—Geo. Brown's 1, center 7-9-1, dr 2500 ft.

Comanche County—Mid-Kansas' Cox 1, ne se ne 20-1-12, td 1920 ft, sd.

Garfield County—Sinclair's Fee 1, sw sw ne 2-20-5, dr 5035 ft.

Grant County—Ostot Dev. Co.'s Snyder 1, ne 6-28-4, td 4546, fsh 5 in. Brazell & Mosee, Royce 1, sw nw 34-28-4, sd 550 ft. Dedman et al's Sherran 1, ne sw 16-26-3, sd1910 ft.

Hughes County — Snodder & McSweeney's Stewart 1, nw se 11-5-9, proposed lcn.

Kiowa County—A. C. Varner's Boham 1, se sw nw nw 5-6-10, sd 1127 ft, litigation.

Kingfisher County — Pet. Eng. Core Drlg. Co.'s Canfield 1, nw se 6-16-7, rig. McKenna et al, Sturgeon 1, nw sw 27-16-8, sd 2115. Reiter et al, Davisonal 1, sw 23-15-5, rig (T. B. Slick has taken over).

Kay County—Ponca Lee's McNeal 1, ne 32-26-2 td 2795 ft, sd. Tonkawa Dev. Co., McDaniels 1, se se se 15-25-1, hfw 2450-75 ft, sd 2535 ft, td.

Lincoln County—Wentz's Lukenbeal 1, sw se 34-17-2, sand 4823-46 ft, hfw, going deeper.

Logan County—T. B. Slick's Berry 1, sw se 28-17-1, sand 4658-61, 2800 ft oih, rm 5 in. Blackford's Lier 1, s 1 n¼ se 28-16-1, sd 1675 ft, litigation. Bryan & Emery 1, nw se 33-19-4, show oil 4040 ft, cmt 6 in., dr, plug and water broken. Carter's Roges 1, sw ne sw 32-19-3, dr 4990 ft. Brown & Blevens Lovell 1, sw nw 9-18-4, dr 4050. Healdton's Braggs 1, nw se 16-18-4, dr 3275 ft. T-P's Jewell 1, nw ne nw 27-18-4, ru; Speaks 1, se nw 33-18-4, dr 1060 ft. Haley et al's Quair 1, sw se 33-18-3, td 1900 ft, rig rebuilt and co. Zingery et al's Baker 1, nw ne 5-17-1, dr 5703 ft.

Cimmaron County—Jake Phillips' 1, nwc 24-6-2, dr 1750 ft. Sinclair's 1, nw 22-5-2, dr 1600 ft. Ramsey Bros.' St. Land 1, nw ne 27-5-5, top sand 4095 ft, td 4150 ft, show for 35 bbls. Ramsey Pet. Co.'s School Land 1, se 4-5-6, dr 1650 ft. Gladys Belle's Israel sw ne 25-3-7, dr 1920 ft. Fenton et al's Smaltz 1, se ne ne spd and sd.

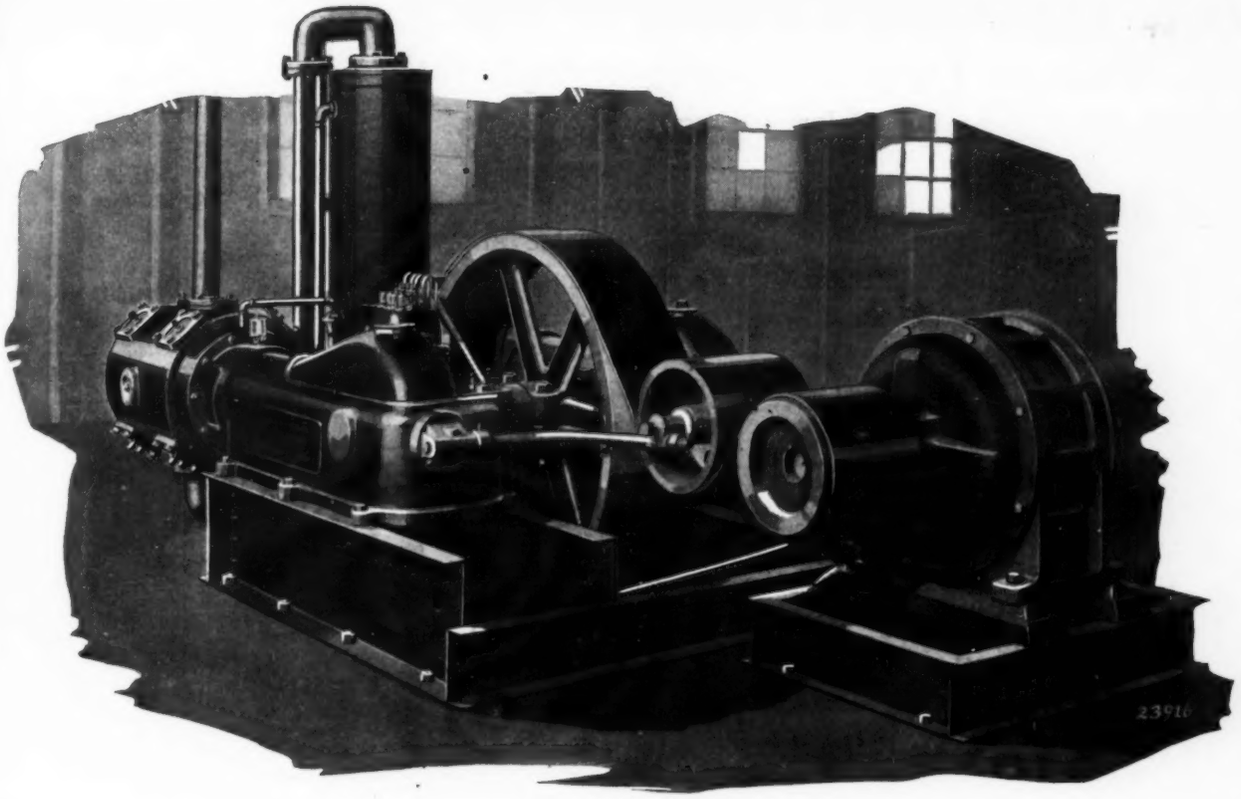
Payne County—Twin State's Tibler 1, ne nw ne 23-18-1, dr 2981 ft.

Noble County—Miller's 101 Ranch 1, ne 1-24-1, hfw 4505-4509 ft, td, D & A plugging.

Pottawatomie County—Shaffer et al Ives 1, ne se se 12-10-3, sd 3620 ft. Davis et al's McGrathy 1, se nw 10-6-3, td 4890 ft, co. Mid-Kansas Mullens 1, ne sw sw 34-8-3, dr 2520 ft. I. T. I. O. Co.'s School Land 1, se sw 16-8-5, sand 3635-38, show oil, dr 3620 ft. Roxana's 1, nw, nw sw 22-7-3, dr 3610 ft. Magnolia's School Land 1, sw se 36-7-3 td 365 so.

Seminole County—Superior's Noble 1, se sw se 10-9-6, cmt 8 in. 3490 ft. Pure's Joah 1, c e 1 nw ne 15-9-7, ts 3494 ft, td 3513 ft, 10 bbls oil, 30 water per hr. I. T. I. O.'s Sandlin 1, ne ne 9-7-6, 2781 ft; House 1, nw nw nw 1-7-6, td 3185 ft, ur 8 in.; Sarah Wiseman 1, nw sw 32-7-7, dr 2611 ft. Simmons et al, Lammeter 1, nw ne ne 7-7-6, rig, Philmacke's Harjocke 1, nw nw ne 19-8-7, td 1812 ft, fsh.

Tillman County—Ossie Drlg. Co.'s Snelling



New Records from this New Compressor

The production records of a comparatively new but well-known Oklahoma field show approximately two-thirds of the enormous supply coming from one-third of the wells. And those wells showing the high production are the ones equipped with gas lift.

On the face of such a report one can see only the enormous possibilities in the installation of this method of pumping. But the economy of such a system may still be low. Economy depends on the Compressors.

Ingersoll-Rand Company has developed the Type XOB Compressor for this application. The Company's engineers have been in the field and have been studying the demands made on these machines for several years. They have developed this unit with one purpose in view—to fit the oil producer's job.

The Type XOB Compressor is a two-stage machine of duplex construction. This construction gives a flexibility to the compressors which can be obtained with no other design.

Different sizes of cylinders are available for this unit, so that it can easily meet any pressure conditions it is liable to encounter. These are all stocked in local warehouses throughout the fields; hence immediate delivery is always possible.

INGERSOLL-RAND COMPANY

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Dallas, El Paso, Los Angeles, New Orleans, San Francisco, St. Louis

Ingersoll-Rand

Over 10,000,000 Reversals Of Strain In Twelve Months With No Change of Springs or Repairs

RATIGAN'S "SURE GRIP"

This is, indeed, a record we're proud of—a record for consistent, dependable and economical performance that should convince the most skeptical operator that the

RATIGAN SHOCK ABSORBER MAKES GOOD!!

The inherent economy of its maintenance is significant. Its outstanding performance in safely and surely cushioning the hammer blows and reversal strains on rods, rig and pumping equipment should appeal to the progressive operator—and it has made good in small producing wells as well as in those of the largest capacities.

It requires no oil. It requires no attention. It saves rods. It prolongs the life of the rods, belt, engine and other pumping equipment. It reduces shut-down periods. It increases production and profits.

The foregoing are proven facts—not theories! Ask a user in your vicinity, or write us for complete information and operating data. It's the horizontal spring that does the "trick"—let us explain in detail.

Ratigan Shock Absorber (Patented)

J. P. Ratigan
Manufacturer
1213 Santa Fe Avenue, Los Angeles, California

Mid-Continent & Rocky Mountain Fields: Frick-Reid Supply Company

East of the Mississippi: Frick-Lindsay Company

Pacific Coast Fields: All Supply Houses

If It's a "SURE GRIP" It's SURE SAFE

You Get More Oil Through the
STANCLIFF
(PATENT)
WELL SCREEN

Write for descriptive literature

Howard Smith Co.
806 Walnut St. Houston, Texas

1, se 13-1-18, sd 1525 ft. P. C. Doan et al's Deaner 1, se se 21-3-18, dr 2350 ft. Pearson's Nonte 1, sw 3-5-15, len.

Texas County—Haley et al, Ellison 1, nw se se 4-1-12, dr 3750 ft. Connell et al's Tensey 1, se nw 5-1-19, spd and sd.

Pontotoc County—American Oil Co.'s Roy 1, se nw 34-5-6, sd 2000 ft. Bowles et al's Lewis 1, se sw 29-5-5, spd and sd. Tom Slick's Carham 1, sw se 21-5-6, dr 560 ft.

ARKANSAS

Completions

Company, Well and Location	Initial Production Bbls.	Depth
Bradley County—		
Magnolia, Timber Co. 1, 33-15-11..	*	4370
Union County—		
Magnolia, Childs 1, 8-16-16.....	*	2743

Ashley County—Rhodes et al's Bledsoe 1, 20-15-7, sd 2554 ft.

Bradley County—Arkansas F. O. Co.'s Ark. Lbr. Co. 1, 25-16-12, sd 3144 ft. Johnson & Adams Southern Lbr. 1, 12-12-12, fsh 1530 ft.

Columbia County—Colquitt et al's Duffer 1, 23-18-19, set 12¼-inch at 108 ft. Columbia Synd.'s Whitehead 1, 14-19-23, dr 2340 ft. Haynes et al's Runyon 1, 3-16-21, sd 150 ft. Mair et al's Gantt 1, 15-17-22, dk. Wingfield et al's Bodcaw 1, 4-20-21, sd 2025 ft.

Clark County—Whelen Oil Co.'s Barrow 1, 25-10-20, dr 663 ft.

Drew County—McClintock et al's Ogle 1, 35-13-5, sd 2550 ft.

Grant County—Jones et al's Meek 1, 5-4-11, rig.

Garland County—Chaywood Oil Co.'s Malvern Lbr. 1, 17-2-17, dr 197 ft.

Hempstead County—Burton et al's Garland 1, 23-10-25, sd 2210 ft.

La Fayette County—Arkansas F. O. Co.'s Duty 1, 11-19-25, dr 1100 ft. Ken-Saw Pet. Co.'s Red River Lbr. 2, 5-20-24, sd 2840 ft.

Lincoln County—Pine Prairie O. & G. Co.'s Carter 1, 33-10-6, sd 240 ft.

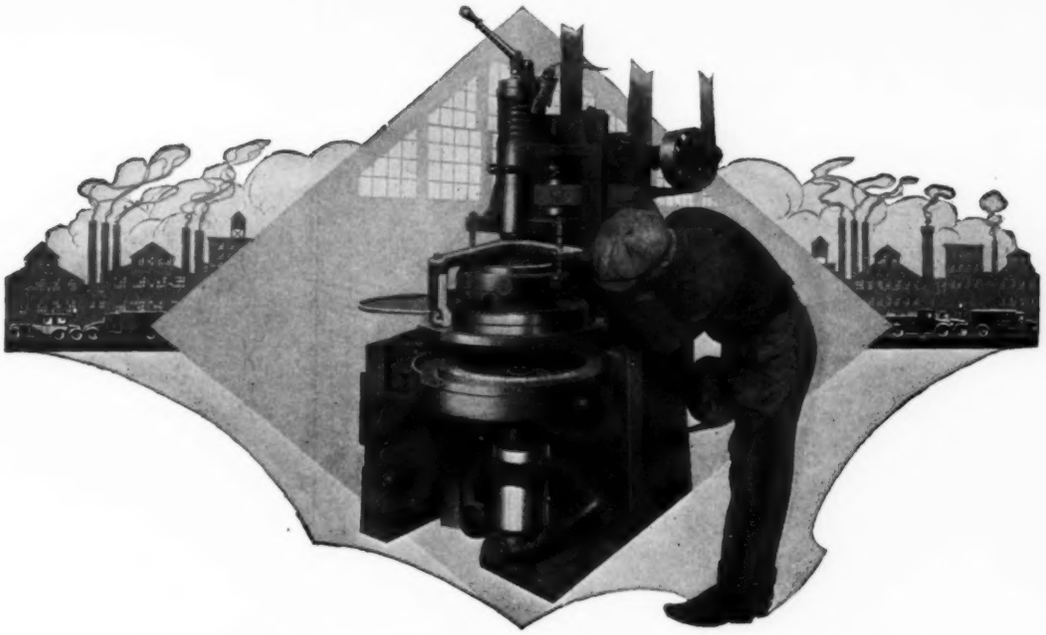
Little River County—Greeson et al's Waldrip 1, 4-13-21, sd 1740 ft. Grote et al's Allen 1, 2-13-31, sd 2941 ft. Johnson et al's Hawkins 1, sd 1594 ft.

Miller County—Lenge et al's Dale 2, 28-15-26, r 2765 ft. W. D. Nash's Priest 1, 26-14-26, sd 3850 ft.

Nevada County—Fruen et al's Cross 1, 12-13-22, sd 1720 ft; Rhodes 1, 22-12-21, sd 1900 ft. Holmes et al's Wallace 1, 11-14-21, sd 1200 ft. Humble Oil Ref. Co.'s Bodcaw 4, 9-15-22, r 3601 ft.

Ouachita County—Copenhagen et al's Berg 3, 13-15-17, dk. J. E. Crosby's Berry 12, 33-15-15, dr 4243 ft. Exchange Oil Co.'s Umsted 3, 4-16-15, dk. A. T. Grayson's Reynolds 1, 21-14-17, tested gas 1744 ft. Gulf's Bennett 11, 33-15-15, dk. Imperial O. & G. Co.'s McClannahan 9, 6-16-15, set 4¾-inch 2666 ft. W. R. Keever's Hicks 1, 27-15-16, cementing off bottom at 2290 ft. Magnolia's Gosden 2, 15-15-19, re-cem 8¼-inch cas 1542 ft; Morgan 1, 7-15-19, dk. Marine Oil Co.'s Umsted 11, 5-16-15, dr 2165 ft. J. D. Reynolds' Chandler 1, 3-14-18, skidding over to start new hole. A. M. Sutton's Schoolhouse 2, 28-15-16, sd 3060 ft. T. P. Coal & Oil Co.'s Laney 9, 31-15-15, dr 2475 ft. Unity Pet. Co.'s Umsted A-8, 33-15-15, dr 2388 ft; Murphy 1, 2-16-15, sw 2690 ft. Wesson et al's Culp 1, 22-15-19, set 6⅝-inch 2123 ft.

Union County—C. H. Allison's Howard 1, 8-19-13, sd 15 ft. Arkansas F. O. Co.'s La-Grone 8, 1-16-17, dk. Bondurant et al's Garner 1, 8-18-22, r 2635 ft. Crescent Oil Co.'s Saxon 1, 5-16-16, sd 53 ft. Garrett & Modisette's Union Saw Mill 1, 7-18-13, coring 3614 ft. W. H. Gilliland's Hodges B-1, 1-16-17, sd 2527 ft. Gulf5s Murphy 23, 9-16-15, dr 2415 ft; Murphy 44, 3-16-15, dk. Humble's Flenniken B-2, 9-16-15, tested dry; Pate 10, 10-16-15, dk. Holly Field et al's Murphy 2, 9-16-15, co 2757 ft. Imperial O. & G. Co.'s Murphy 7, 9-16-15, 1 million ft gas 2707 ft; Murphy 5, 9-16-15, fsh 2565 ft; Goodwin 1, 22-17-16, sd 3118 ft. Keen & Wolfe's Murphy 5, 9-16-15, rig. Lion O. & R. Co.'s Bilyew C-7, 8-16-15, dk; Flenniken A-9, 10-16-15, arr to test 2396 ft; Lawton A-11, 10-16-15, rig; H. Murphy 6, 9-16-15, arr to test 2712 ft. Magnolia's Crawford 2, 8-16-16, dr 650 ft; Crawford 3, 8-16-16, dk; Freeman 3, 7-16-16, set 10-inch 275 ft; Laney 3, 8-16-16, dk; Laney 4, 8-16-16, dk; Murphy 3, 8-16-15, dk; Murphy 9, 8-16-15, dr 1530 ft;



Dry Grinding—Another Step in Making Hoover Steel Balls

Specially designed batteries of dry grinding machines, semi-automatic in operation, are used for the first, rough grinding operation which removes a predetermined amount of metal from the balls as they come from the heading and forging machines. In this operation, the balls begin to assume the accurately spherical form which approaches perfection in the later stages of production.

Hoover dry grinding machines operate at definite speeds and at definite wheel pressures, so as to remove the metal in a way which can have no detrimental effect on the finished balls. The top, or driving ring, illustrated in the machine above, is used to rotate the balls against the lower ring, which is an abrasive wheel, rotating in an opposite direction to the balls.

The whole Hoover Story is one of "Quality First". That this principle has paid is proved by the fact that practically every quality machine made in America is Hoover-equipped.

This is Seventh of a Series of Stories Explaining the Manufacture of Hoover Balls

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Chicago, 1901 Mallers Building *Detroit, General Motors Building*
Philadelphia, Liberty Trust Building

HOOVER

CHROME MOLYBDENUM *and*
Steel · Brass · Bronze
Monel Metal · Stainless Steel- **METAL BALLS**

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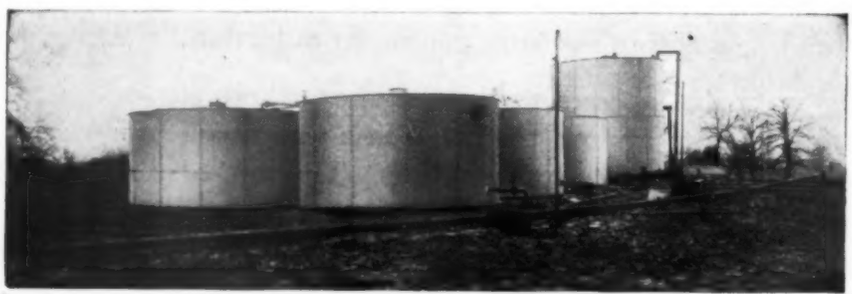
Where Nabors Trailers Are Built

HERE'S the South's largest plant devoted exclusively to the manufacture of Truck Trailers. The great investment in this manufacturing plant is assurance of dependable service in the matter of parts through dealers everywhere. And it's the answer to the uniformity and standardization that has made Nabors Trailers famous.

W. C. Nabors Company

Mansfield, La.



Maloney Tanks Installed for Savoy Oil Co. at Oakhurst

Made of the Most Durable Steel

Exceptionally long life—which means utmost tanke economy—is insured for MALONEYS by the use of rust-resisting Keystone Copper Steel. Actual exposure tests, impartially conducted, have proved Keystone to be decidedly the most durable sheet steel ever developed. To further promote their resistance to corrosion, MALONEYS are painted by means of a fine spray which forces the paint into the pores of the metal and prevents it cracking off.

Howell Aluminum "3 in 1" Vacuum Pressure Valve and Thief Hatch—The BEST and LATEST Deck Equipment—POSITIVE Safety

THE MALONEY TANK MFG. CO.

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MADE OF KEYSTONE COPPER STEEL

Distributors at All Principal Petroleum Points
Sizes 12 to 3,000 Bbls.

Packed in Steel-Bound Crates for Export

MADE OF KEYSTONE COPPER STEEL

MALONEY

Saxon 4, 5-16-15, wosr 2260 ft; Wilson 6, 17-16-15, dr 517 ft; Wilson 7, 17-16-15, dk; Union Lbr. Co. 1, 21-16-16, dk. Marine Oil Co.'s Winn Est. B-1, 10-18-13, pul liner 2691 ft; Thompson A-2, 10-18-13, setting 6-inch 2659 ft. J. L. Meek's Milner 2, 15-17-16, rig. Mountz et al's Pratt 6, 8-18-15, dr 703 ft. O. G. Murphy's T. C. Murphy 6, 9-16-15, milling 2260 ft. National Cons. Pet. Co.'s Fagg 2, 8-16-16, set 6-inch 2628 ft. Natural G. & F. Corp.'s Flenniken 4, 8-16-15, junked 2765 ft; Murphy F-1, 9-16-15, arr to deepen with calbe tools 2773 ft; Bilyew 4, 9-16-15, milling out casing 1300 ft. Ohio Oil Co.'s Crane 1, 1-17-14, arr to test 3014 ft; Murphy 4, 9-16-15, setting 4¾-inch 2692 ft. J. W. Olveys' Simmons 1, 15-18-13, set 6-inch 2662 ft. Peer Oil Co.'s Palmer B-1, 9-16-15, fsh 2343 ft. Roxana's Flenniken 3-A, 10-16-15, dr 2598 ft. Rovenger Oil Corp.'s Harrell 4, 14-17-16, dk. McClain 1, 4-17-14, dr 2611 ft. Simms Oil Co.'s Crawford 1, 14-18-13, rig. Stewart et al's Murphy 8, 9-16-15, dr 2100 ft. Sunny Jim Oil Co.'s Flenniken 4, 9-16-15, pulling cas 2365 ft. Superior Oil Co.'s Jerry 1, 32-17-13, sd 3022 ft; Cordell 2, 5-18-13, fsh 2945 ft. Sun's Hays 3, 3-16-15, perf cas 2293 ft. Unity Pet. Co.'s Roper 15, 3-16-15, dk. Wingfield et al's Green 1, 15-19-13, dk.

LOUISIANA

Completions

Company, Well and Location	Initial Production Bbls.	Depth
Caddo Parish—		
Murphy et al, Youree 1, 13-20-15..	*	2304
H. H. Morris, Fields 2, 24-22-15..	*	....
The Texas Co., Glassell 2, 14-20-15..	*	2960
Victor Wenzel, Thomas 4, 15-20-15..	*	....
Claiborne Parish—		
Brown et al, Beard 1, 28-19-5.....	*	2500
Moorehouse Parish—		
Standard, Interstate 4, 9-19-8d.....	*	1730
Natchitoches Parish—		
Ohio, L. & A. 1, 23-13-6w	*	2905

Bienville Parish—S. F. Borden's L. & A. 2, 9-15-7, dr 100 ft. Kimbrough et al's Cargyle 1, 27-15-8, sd 1550 ft.

Bossier Parish—Bethany O. & G. Co.'s Dodson 1, 16-23-12, set 6-inch 3078 ft. Clark & Norton's Ford 1, 32-23-12, dr 2235 ft. Doern et al's Thomas 1, 9-22-11, set 6-inch 2760 ft. Glassell et al's Gibson-Tiguer 1, 14-21-14, dr 384 ft. Gulf Ref .Co.'s Hodges 6, 24-16-12, set 4½-inch 1865 ft. Harrell Drilling Co.'s Atkinson 1, 2-18-12, sd 1220 ft. Humble's B. & W. 30, 15-19-11, dr 503 ft. Magnolia's Dodson 1, 15-23-12, dr 2125 ft. Palmer Corp.'s Bossier Lbr. 3, 9-16-11, arr abn 3832 ft. Sligo Synd.'s Webb 1, 24-17-12, sd 2392 ft; Jeter 1, 23-17-12, dk. Simms Oil Co.'s Sandidge 2, 5-18-11, dr 1082 ft. Texas Co.'s Caplis 14, 24-16-12, set 6-inch 1545 ft. Tubbs et al's Jacobs 1, 26-20-13, dr 1900 ft. Triangle Drilling Co. et al's Levy 1, 13-20-15, dr 1500 ft.

Caddo Parish—Big Lake Oil Co.'s Rhodessa 1, 23-23-16, sd 3003 ft. Bahan et al's Wilburn 1, 4-7-16, dk; Wilburn 2, 4-7-16, rig. Bethany O. & G. Co.'s Offenhauser 1, 1-20-16, dr 2190 ft. Berston's Murff 6, 12-21-16, dr 930 ft. Burford et al's Dambley 1, 2-20-16, dr 2100 ft. Dixie Oil Co.'s Robertshaw 81 13-21-15, trying to get returns 3739 ft; Robertshaw 86, 14-21-15, dr 400 ft; Slattery 10, 27-21-15, coring 3834 ft; Noel A-2, 13-21-15, coring 3641 ft. Dodson et al's Rives 4, 5-20-16, bailing 1873 ft. Double I Oil Co.'s Spell 10, 15-21-15, dk. Empire Gas & Fuel Co.'s Levee Board B-1, 36-21-16, set 15½-inch 20 ft. J. B. Files' Payne 1, 32-23-16, sd 925 ft. Falcon Drilling Co.'s Schmidt 1, 27-20-15, dk. A. C. Glassell's Thigpen & Herald 1, 26-18-16, dr 600 ft. Gilliam Synd.'s Sellington 1, 27-21-14, sd 2832 ft; Taylor 1, 17-21-14, set 6-inch 880 ft. Gulf Ref. Co.'s Ferry Lake 266, 28-20-16, set 6⅝-inch 2141 ft; Ferry Lake 267, 28-29-16, set 6⅝-inch 2140 ft; Ferry Lake 268, 22-20-16, lcn; Tyson 13, 14-21-15, rig. Galloway et al's Smith 1, 15-21-16, set 10-inch 60 ft. Haynes Bros.' La. L. S. & P. 1, 8-19-16, sd 3712 ft. N. M. Handcock's Hampton 3, 15-21-15, dr 1565 ft. Magnolia Pet. Co.'s Caddo L-B 2, 8-20-15, set 4½-inch 2910 ft; Dillon 16, 24-21-15, bailing 1750 ft; Dillon 18, 24-21-12, dk; Dillon 20, 24-21-15 set 8⅝-inch 109 ft; Planters 4, 7-21-14, dr 2167 ft; Robertshaw 20, 23-21-15, dr 3023 ft. H. I. Morgan's Glassell 1, 10-20-15, dr 1650 ft. Ohio Oil Co.'s Moodie Fortner 1, 5-22-16, dr 375 ft; Wilburn 3, 4-17-16, lcn; Bell 1, 5-17-16, rig. Shreveport Oil Corp.'s State 1, 28-21-16, dk;

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State 2, 27-21-15, sd 510 ft. Standard Oil Co.'s Trosper 1, 34-18-16, dr 2680 ft; Stiles 178, 33-21-16, wosr 1838 ft; Stiles 181, 33-21-16, dr 25 ft. Standish Oil Co.'s Allen 11, 23-22-15, dr 600 ft. The Texas Co.'s C. M. L. 47, 23-21-15, r 3626 ft; Hardy 1, 10-20-16, bailing 2282 ft; Herndon 6, 22-21-15, dk; Hicks & Payne 5, 21-21-15, drill stem stuck at 3143 ft. Thomason et al's Muslow Fee 7, 31-21-15, dr 2180 ft.

Caldwell Parish—Humble's La. Central Lbr. A-4, 12-11-2e, dr 1660 ft. Southern C. O. P. Co.'s Caldwell L. & T. Co. 8, 5-13-5e, rig.

Catahoula Parish—S. D. Hunter's Tensas Delta 2, 21-9n-7e, rig. Lochnager O. & G. Co.'s Beazley 1, 26-9n-6e, sd 3093 ft.

Claiborne Parish—El Dorado Chief Oil Co.'s McElwee 1, 13-23-7, sd 3040 ft. Magnolia Pet. Co.'s Lee 1, 16-22-8, dr 3070 ft. Mitchell et al's Wilburn 1, 23-17-1, sd 2220 ft.

De Soto Parish—Craige et al's Riggs 1, 27-15-13, dr 3205 ft. Dixie Oil Co.'s Jenkins 1, 9-12-11, fsh 5283 ft. Helm & Jarmen's Joyner 1, 28-12-11, fsh 3005 ft. Magnolia's Logan 1, 17-10-12, rig. W. M. Sebastian Synd.'s Sebastian 1, 11-10-13, set 10-inch at 144 ft. Seip et al's Robertson 1, 18-10-12, sd 300 ft.

Franklin Parish—Exploration Oil Co.'s Moore 1, 12-11-6e, set 6-inch 2120 ft. Harrel & Hall's Duncan 1, 20-13-7e, coring 2084 ft. Robinson & Long's Baker 1, 3-15-7e, sd 1443 ft.

Grant Parish—Gulf's Swope B-1, 1-9-1w, dr 1658 ft; Swope B-2, 12-9-1w, set 10-inch 164 ft. Rue et al's Elias & Williams 1, 10-7-4w, dr 1360 ft. M. B. Swope Fee 1, 18-9-1e, rig.

Jackson Parish—Grigsby et al's Adams 1, 22-17-4w, sd 2900 ft. Houseman et al's Norton 1, 34-15-3w, sd 400 ft. Ferguson Trust's Martin 1, 3-15-1e, flowing sw 3475 ft. Louisiana Pet. Co.'s Davis Lbr. Co. 3, 22-16-4w, sd 2301 ft.

La Salle Parish—Ayers et al's Tremont 4, 30-10-2e, dr 600 ft. Modisette Drilling Co.'s Urania 4, 7-10-2e, dr 1350 ft. Tunica Pet. Co.'s L. & A. 23, 9-7-2e, r 1500 ft; L. & A. 25, 8-8-3e, dr 1350 ft. Wingfield et al's Urania 6, 2-9-1e, dr 1450 ft.

Moorehouse Parish — Consolidated Carbon Co.'s White 1, 16-20-4e, set 12½-inch at 189 ft. La. Dev. Co.'s Fee 38, 21-20-5e, dr 1300 ft.

Ouachita Nat. G. Co.'s Allison 8, 7-20-5e, dr 2206 ft. United Carbon Co.'s Townsend 1, 29-21-5e, set 8-inch at 868 ft; Atkins 1, 26-20-5e, dk.

Natchitoches Parish—Gulf's Cobbie & Hardaman 1, 9-7-7w, rig. Lawson et al's Clark & Moore Lbr. Co. 1, 23-5-6w, washing 2528 ft. Ohio Oil Co.'s Thomas 1, 23-13-6w, dr 75 ft. Reidheimer et al's Wafter 1, 3-11-8, r 1462 ft. Three League Oil Co.'s Long 1, 34-10-8w, rig. Tunica Pet. Co.'s L. & A. 24, 35-13-6w, dr 2333 ft. Wenzel et al's Brown 1, 38-10-7w, dk.

Ouachita Parish—Easterling et al's Sicard 1, 18-18-4e, set 6-inch 2200 ft. Jordan Drilling Co.'s Moore 1, 18-18-4e, dr 2021 ft. La. Dev. Co.'s Fee 39, 1-19-4e, set 8-inch 840 ft. La. Gas Prod. Co.'s Dewdrop 5, 20-20-5e, dk. Ouachita Nat. G. & O. Co.'s D'Arbonne 2, 25-19-2e, sd 2780 ft. Peerless Co.'s Moore 3, 29-20-4e, lcn.

Rapides Parish—Hincey et al's Barrow 1, 29-5-2e, sd 2800 ft. Minnesota Oil Corp.'s Wattermack 1, 7-5-3w, sd 1718 ft. Libuse Oil Co.'s Voda 1, 14-4-1e, sd 2550 ft.

Red River Parish—Alden Oil Co.'s Powell 1, 13-11-10, sd 2301 ft. Amerada's Long Bell 1, 5-13-9, 2655 ft. Gulf's Robinson 37, 25-13-11, co 2518 ft; Kennedy 23, 24-13-11, rig. Magnolia's Continental Pelly 24, 6-12-10, wosr 2810 ft. Phillips Pet. Co.'s Long Bell 1, 16-12-8, dr 2200 ft.

Richland Parish—Gulf's Rhymes 2, 5-16-6e, dr 2240 ft; Wayne L. & T. 1, 36-17-5e, coring 2700 ft; Seibert 1, 35-17-5e, dk; Seibert 2, 11-16-5e, rig. S. D. Hunter's McCoy 1, 29-16-5e, set 4¾-inch 2427 ft; Seibert 1, 1-16-5e, sd 2358 ft. Helm et al's Tensas 1, 10-14-5e, dk. Louisana Pet. Co.'s Binion 1, 22-17-6e, sd 2474 ft. Oliver et al's Hatch 1, 2-15-5e, trying to set cas 2316 ft. Ruston Drilling Co.'s Earle 1, 5-16-6e, rig. Stovall Drilling Co.'s Mitchell 1, 20-17-6e, dr 2225 ft. Standard Drilling Co.'s Delta H. L. Co. 1, 22-16-7e, set 12½-inch 160 ft. Tex-La Carbon Co.'s Broughton 1, 1-15-6e, dr 2360 ft.

Sabine Parish—Arkansas F. O. Co.'s Logan 2, 28-10-12, rig; Logan 3, 33-10-12, sd 3105 ft; Logan 4, 33-10-12, sd 3155 ft; Logan 5, 28-10-12, sd 3108 ft. Beckman & Freeman's Logan 1, 28-10-12, dr 1920 ft. Emlett et al's Bowman-Hicks 5, 11-7-14, sd 4070 ft; Bowman-Hicks 7, 11-7-14, arr to make Haliburton test 2623 ft; Sabine Lbr. 1, 8-7-1e, dk. Lewis Clark Pet. Co.'s Wyatt 1, 23-5-12, sd 3140 ft. Magnolia's L. L. L. Co. 1, 11-6-11, dr 3202 ft; Hall 1, 33-10-12, dk. Moffitt et al's Moore 1, 5-2-12, dr 2060 ft. Ohio Oil Co.'s Cook 1, 34-10-12, dr 3296 ft.

Union Parish—Camette et al's Tugwell 1, 21-22-1e, dr 1525 ft. Clark Creek Pet. Co.'s Frost-Johnson 2, 9-23-1e, sd 2307 ft. Interstate Nat. Gas Co.'s Parks 1, 23-20-3e, dk. Rhodes et al's Futch 1, 28-23-2w, sd 1970 ft. United Carbon Co.'s Raburn 1, 28-21-4e, dr 2110 ft. Ruston Drilling Co.'s Gulley 1, 16-20-4e, sd 900 ft.

Webster Parish—Davis et al's Lee 1, 22-22-9, sd 2834 ft. Louisiana Oil Ref. Corp.'s Davis 1, 23-21-10, dr 4220 ft. Magnolia's Robinson A-2, 21-21-10, set 6⅝-inch 2556 ft; Cox 3, 23-21-10, dk.. Northwest Louisiana Gas Co.'s Coyle 1, 21-21-10, set 6⅝-inch 2720 ft. Ohio Oil Co.'s Bank of Cotton Valley 2, 22-21-10, dk; Bank of Cotton Valley 4, 22-21-10, fsh 4573 ft. Woodley Pet. Co.'s Cox 1, 22-21-10, dr 4390 ft.

Winn Parish—Cherokee Pet. Co.'s Albritton 1, 27-10-1e, sd 900 ft. Dodge et al's Tremont 1, 35-13-3w, sd 1042 ft. Greer et al's Bodcaw 2, 9-11-4w, rig. Humble's L. & A. 20, 27-10-2w, sd 1450 ft. J. C. Long's Milam 1, 26-13-3w, sd 1450 ft. OhioOil Co.'s Edenborne 2, 4-12-1w, made Haliburton est 4454 ft; McCarty 1, 5-12-1w, lcn. Rowet et al's Urania 1, 26-11-1e, dk. H. M. Roarks So. Min. Co. 1, 19-11-3w, dr 60 ft. F. A. Schuman's Albritton 1, 27-10-1e, sd 1518 ft. Standard's Tremont 1, 1-12-2w, dr 3649 ft.

MOUNTAIN STATES

WYOMING

Fairway Oil Co.'s Crazy Woman 1, 7-47-82, sd 7-47-82. Slagle & Alevizaker's Basin 1, 25-51-93, lcn. Winter-Baker Synd.'s Oil Mountain 1, 17-33-94, resuming operations, td 802 ft. Union of Calif.'s Black Mountain 1B, nw 28-43-91, dr 2585 ft Black Mountain 1S, nw 34-43-91, dr 4265 ft; Park County 1T, nw 22-47-101, dr 922 ft; Fremont County 1C, ne¼ 15-51, dr 4372 ft. Criterion Oil Co.'s Douglas 1, ne 5-31-70, sd 3102 ft. Wellington Oil

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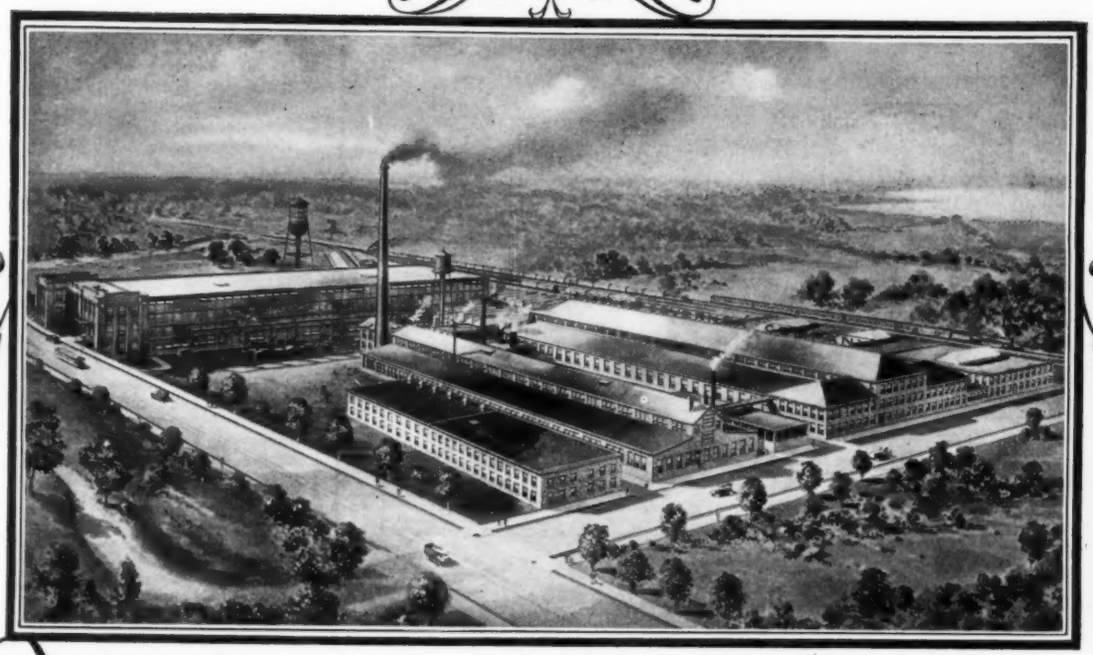

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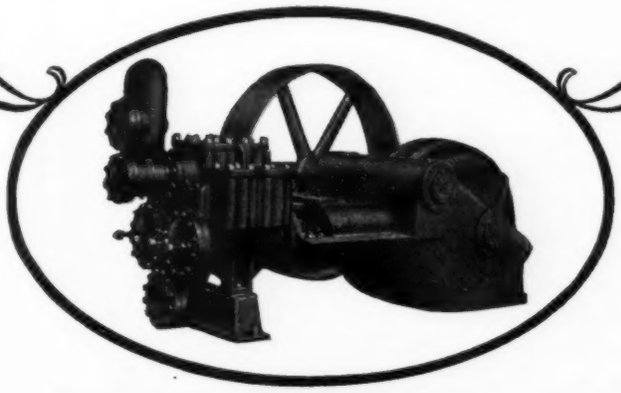

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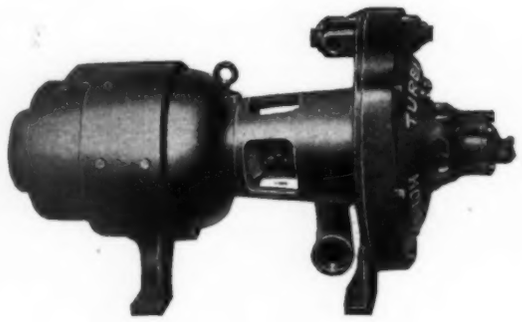

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Co.'s Bear Creek 1, nw 18-25-98, sd 2540 ft. Iowa-Wyoming Inv. Co.'s Megown 1, ne 30-1-2, sd 3300 ft. Producers & Refiners' Medicine Bow 1, 25-21-79, dr 3785 ft; Big Sand Draw 5, 10-32-95, sr 3420 ft; Big Sand Draw 7, 14-32-95, dr 2760 ft; Tensleep 1, 13-46-89, rig comp.; Garland 2, 24-56-89, sd 2640 ft. John Ackard's McKinley 1, ne 28-31-69, sd 2110 ft. Texas Prod. Co.'s Maverick Springs 7, 26-6-101, dr 2010 ft. Carter Oil Co.'s Nowood 1, sw 5-48-90, dr 1830 ft; Billy Creek 1, se 17-48-82, fsh 4400 ft. Osage Trust Co.s Arch Creek 1, se 29-49-64, fsh 1325 ft. Ohio Oil Co.'s Byron 2, 33-56-99, setting 8¼ cas 2480 ft. Carroll Synd.'s Crook County 1, 5-51-67, will resume operations, td 805 ft. Platte River Drlg. Assn.'s Guernsey 1, nw 12-26-67, may abn, td not given.

COLORADO

Boulder Drlg. Co.'s Boulder 1, 9-1-70, dr 1625 ft. Repollo Oil Co.'s Boulder 1, 33-1-70, dr 4410 ft. Frank E. Kistler Synd.'s Boulder 1, 28-2-69, dr 1516 ft. Branson Oil & Gas Co.'s Las Animas County 1, 32-34-56, lcn. Northeastern Colorado Oil Co.'s Willard 1, 36-8-55, dr 2920 ft. Phillips Pet. Co.'s ElPaso County 1, 27-16-65, lcn. Texas Prod. Co.'s Rangely 2, 30-2-102, 8¼ in set on bottom, td 3000 ft. Platte Valley Petroleum Co.'s Weld County 1, 24-6-61, dr 2508 ft. Essok Oil Co.'s Boulder 1, 5-1-70, dr 3916 ft. Panuco Exp. Co.'s Huerfano County 1, 10-29-69, dr 370 ft. Foley & Goldsworthy's Las Animas County 1, 11-30-60, dr 1000 ft. Oliferous Oil Co.'s Fremont County 1L, 36-18-70, sd 1855 ft. Freemont County 1K, 35-19-70, dr 423 ft. Yuma Valley Oil Co.'s Yuma County 1, 11-1-44, will abn, td 3276 ft. Midwest Ref. Co.'s Rio Blanco County 1, 30-2-102, setting 6⅝ cas td 2055 ft.

NEW MEXICO

Delmar Oil Co.'s Chaves County 1, 22-11-26, sd 1960 ft. Argo Oil Co.'s Quay County 1, 5-7-31, dr 1300 ft. Texas Prod. Co.'s Chaves County 1, 29-17-18, dr 3400 ft; Lea County 1J, 4-20-34, lcn. Exploration Co.'s Eddy County 1, 25-19-35, dr 1420 ft. Senate Oil Co.'s Sam Juan County 1, 34-29-11, dr 1740 ft. Mid-Continent Oil Co.'s San Juan Couuty 1, 22-29-11, dr 580 ft. Union Oil & Mining Co.'s San Juan County 1, 8-29-9, wosr. San Juan Pet. Co.'s San Juan County 1, 17-29-13, dr 1100 ft. Mid-Continent Oil Co.'s Eddy County 1, 21-17-30, dr 3414 ft. Arena Oil Co.'s Chaves County 1, 24-12-30, lcn. Cap Rock O. & G. Co.'s Lea County 1, 11-16-32, dr 1000 ft. Hasson Pet. Co.'s Curry County 1, 22-8-6, wosr. Barrett-Beardsly Synd.'s San Juan County 1, 19-27-11, wosr. Marland Oil Co.'s Eddy County 1, 11-20-30, co 400 ft.

UTAH

Embar Oil Co.'s Hulkito 1, 3-20-29, dr 1590 ft. Deseret Pet. Co.'s Gibson 1, 3-20-29, sd 515 ft. Midwest Exp. Co.'s Cane Creek 1P, 5-27-21, dr 1036 ft; Elkridge 1, 20-40-19, setting 10 in, td 1365 ft. Empire G. & F. Co.'s Gibson 1, 6-30-21, dr 1820 ft. Utah Pet. Corp.'s Gibson 1, 1-30-20, fsh for cas, td 1385 ft.

SOUTH LOUISIANA

Assumption Parish—Union Sul. Co.'s Parish School Board 1, dr 975 ft, lime rk and pyrites.

Calcasieu Parish—Union Sul Co.'s Fee 720, dr 4385 ft, shale. Dr. Hintze's Beckenstein 1, dr 4230 ft, broken formation. Border Research Corp.'s Calcasieu Lake 1, dr 4120 ft, sand; no show. Gulf's Lutcher-Moore 5, Starks, dr 3543 ft, sand. Industrial Lbr. Co. 1, dr 1138 ft, sand and bldrs.

Cameron Parish—Yount-Lee's Gulf Land 10, Hackberry, dr 3260 ft, sand and shale; School Land 6, dr 4690 ft, rk; State Land 4, no report after rigging up. Border Research Corp.'s Mallard Bay 1, no report since 2690 ft, shale; Sabine Lake 1, dk. Union Sul. Co.'s Gulf Land 2, Hackberry, lcn; Gulf Land 3, dr 2313 ft, rk; R. Vincent 2, dr 1808 ft, anhydrites; Little 1, dr 1839 ft, rk.

Evangeline Parish—Texas' Guillory 2, Pine Prairie, dr 4225 ft, white sand.

Jeff Davis Parish—Elton Oil Co.'s Buller 1, sd 2065 ft. Estropal Oil Co.'s Duex 2, dr

O. C. I. W.

Fordson Winch

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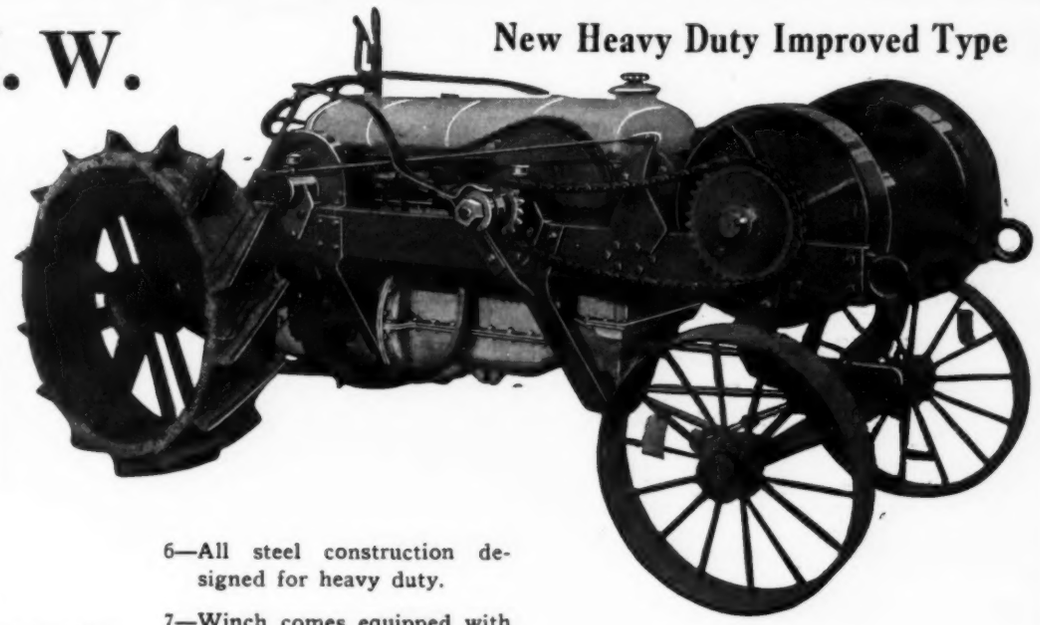

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4—All shafts are made of special alloy steel which is properly heat treated.

5—Winch is equipped with equalizing braking system.

6—All steel construction designed for heavy duty.

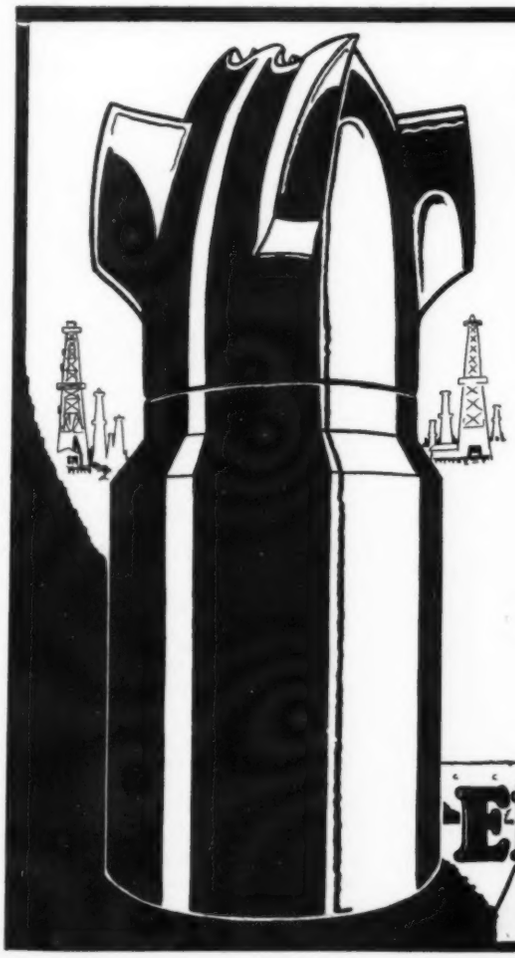
7—Winch comes equipped with either rear or front end control.

MANUFACTURED BY

Oil City Iron Works

Oil Field Equipment and Supplies

SHREVEPORT, LA.



Anything less than an accurate, full recovery core is an apology.

There are no apologies in Elliott History.

ELLIOTT CORE DRILLING CO.
850 Subway Terminal Building
LOS ANGELES, CALIFORNIA

BRANCHES:
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EXPORT OFFICE:
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Elliott-Alco Core Drill

We Have Increased Our Facilities

to serve the oil trade. Our new Oregon Fir Concentration yard in Houston is stocked with Fir LUMBER and Fir TIMBERS brought via Panama Canal.

This enables us to load up to five cars per day of rigs, derricks, foundations, large structural TIMBERS for both cable tool and rotary work. Also we can make combination shipments of Pine and Fir.

We have installed this new Department to SAVE YOU MONEY and IMPROVE OUR SERVICE in straight or mixed cars.

Robertson-MacDonald Lumber Co.

General Offices 1507-08-09 Esperson Bldg. New Offices
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THE
REX STANDING
VALVE

ITS REVERSIBLE, TWO IN ONE VALVE SCREWS IN BOTTOM OF WORKING BARREL COLLAR — REDUCES YOUR TUBING JOBS.

Manufactured in Brass or Steel

Sold by Supply Houses

REX SUPPLY COMPANY
Sour Lake, Tex.
Patented Aug. 15, 1922, No. 1425710

GOULDS PUMPS

Pumps for All Pipe Line and Refinery Service

Catalogs and Bulletins on request

GOULDS PUMPS, INC.
Seneca Falls, New York

1001 Second Natl. Bk. Bldg.
Houston, Texas

216 Alexander Bldg.
Tulsa, Okla.

2820 ft, gbo and shale. Fred Getty's Lacasine Irri, 3515 ft, sandy shale, tool stuck.

Iberia Parish — Gulf's Broussard 1, Eagle Point, temp. sd 3193 ft; State Z-2, driving piling for dk. Calcasieu Oil Co.'s Schwing A-1, Eagle Point, dr 2732 ft, sand rk. Border Research Corp.'s Vermillion Bay 1, no report.

St. Landry Parish—Bristol O. & G. Co.'s Breaus 1, sd 3015 ft. Terre Bonne Gas Co.'s Whitman 1, sd 2650 ft.

St. Martin's Parish—Rycade's Atchafalaya 1, dr 3759 ft, hard sand. Ohio Oil Co.'s Martin 1, standing.

St. Mary Parish — Border Research Corp.'s Grand Lake 1, 4519 ft, gbo, sd for orders; West Cote Blanche 1, no report.

TEXAS GULF COAST

Completions

Company, Well and Location	Initial Production Bbls.	Depth
Fort Bend County—		
Gulf, Wolff 1	*	911
Jefferson County—		
Gulf, Thomas 10	*	1194
Liberty County—		
Union Sulphur Co., Kyle 5	*	797
Liberty Bell Oil Co., Eaton 1	*	1425

Austin County—Humble's Austin College 2, dr 1712 ft; Austin College 3, cutting off fresh water 939 ft; Washington 1, set 8 in. over oil sand 1083 ft; Thomposn 2, flowed 35 bbls 17.5 gravity 1007 ft; Reese 2, dr 1104 ft sand; no show; Bellville School 1, cored, no show, 1811 ft; Woodley 1, lcn; Deutrich 1, lcn. Mewis et al's Mewis 1, 3 mi e Bellville, dr 640 ft, gbo. Graves et al's Cleveland 1, Hickory Mound, fsh 1080 ft.

Brazoria County—Roxana's Pabst 2-A, Clemens dome, dr 4466 ft, shell and shale; Clemens 4, dr 4070 ft, shale; Allen Bernard River 1, Allen dome, dr 4930 ft, shale; Allen 3, dr 5445 ft, sand and lime; Reese 2, dr 1859 ft, sand and lime. Pure-Humphreys ' Armstrong 1, Stratton Ridge, dr 2772 ft, rk. Associated's Seaburn 1, dr 2867 ft, gbo and lime. Gulf's Perry 2, dr 1535 ft, gbo and blders. Staley et al's Glover 1, Anchor, dr 563 ft, shale. Texas Co.'s Sweeney 2, n of Danbury, dr 1235 ft, shale and bldrs.

Fort Bend County—Gulf's Trone 2, dr 955 ft, lime; Wolff 1, abn, 911 ft, cap rock; Davis 24, dr 1031 ft, lime rk; Beard 4, 2740 ft, fsh. Texas' Farmer 2, dr 3680 ft, gbo.

Goliad County—Houston Oil Co.'s Pettus 3, 10 mi w Goliad, dr 2804 ft, gbo; Parks 2, 8 mi e Goliad, dr 3390 ft, shale.

Hardin County—Texas' Le Jarza 3, Batson, dr 4515 ft, after bailing salt water 4480 ft.

Harris County—P. S. Griffith's Fee 2, 12 mi n Houston, 3115 ft, wsh over dr pipe Atlantic-Simms' Burt-Griffith 1, 3 mi n Humble, dr 3215 ft shale. Juanita Oil Co.'s Kitsman 1, 3 mi n Cypress, dk. Humble's Warren 1, Hockley, dr 460 ft, gbo.

Jefferson County—Rio Bravo's T. & N. O. 101, ½ mi n Spindle Top, dr 3400 ft, gbo and lime. J. O. Davis et al's Gladys 1, ½ mi w Spindle Top, fsh 4943 ft. Hines Bros.' Roberts 2, ½ mi e Spindle Top, dr 3610 ft, gbo and shale. Deep Test Oil Co.'s McFaddin 1, d mi ne Beaumont, sd 1450 ft. Edmund Tstee's Port Acres 1, 2 mi n Port Arthur, dr 600 ft sand. Gulf's Bordages 2, Fannett, dr 5265 ft, heaving shale; Bordages 3, dr 4333 ft, shale; Thomas 10, abn 1194 ft, gyp.

Liberty County—Union Sulphur Co.'s Kyle 5, Moss Bluff, abn. 797 ft, gyp. Liberty Bell Oil Co.'s Humphrey 1, 1 mi n Liberty, dr 182 ft, clay. Barlow et al's Minchcliffe 1, Excelsor, dk. Liberty Bell Oil Co.'s Eaton 1, 1 mi n Liberty, abn 1425 ft, gbo.

Matagorda County—Gulf's Craig 8, Hawkinsville, dr 4212 ft, shale; Parkinson 2, dr 1328 ft, lime; Parkinson 3, lcn; Sanborn 3, dr 1246 ft, sandy lime.

Montgomery County—Brain et al's Fitch 1, 3 mi e Spring, dr 2270 ft, sand and lime. Beard et al's Beard 1, 15 mi e Conroe, lcn.

Orange County—W. C. Wells, Starks 1, spd. J. T. Miller, Dr. Co.'s Brown-Ocultree 1, Gum Island, dk.

Walker County — N. Thompson et al's Thompson Lbr. Co. 1, sd 1502 ft, shale.

Wharton County—Texas' Felder 3, Boling, dr 4534 ft, hard shale.

Washington County—C. A. DeWare's A. C. Lehmann 1, Brenham, dr 2601 ft, shale and bldrs; Schurenburg 1, Brenham, sd in rk, 1530 ft. Pratt-Hewitt Oil Co.'s Konieczny 1, Brenham, dr 2095 ft, water sand.

EAST CENTRAL TEXAS

Completions

Company, Well and Location	Initial Production Bbls.	Depth
McLennan County—		
Castleman Creek Oil Co., Schaffer 1	*	1658
Cherokee County—		
Humphreys Corp. et al, Stafford 1	*	5124
Van Zandt County—		
B. P. Hervey et al, Smith-Foster 1	*	3708

TEXAS PANHANDLE

Completions

Collingsworth County—		
Duke & Langford et al, Johnson 1	*	2616
Moore County—		
Prairie O. & G. Co., Sneed 2.....	¶11	4300

WEST TEXAS

Completions

Jones County—		
McLester et al, Will Myatt 1.....	*	2750
Marland, Larsen 1	*	2519
Pecos County—		
Crosby Drlg. Co., I. G. Yates 1....	*	1577
Humble & Kirby Pet. Co., Rheinstrom 1	*	2370
Texon, I. G. Yates 1	15	1300
Taylor County—		
Oil Operators Trust Co. et al, Haines et al 1	*	2604

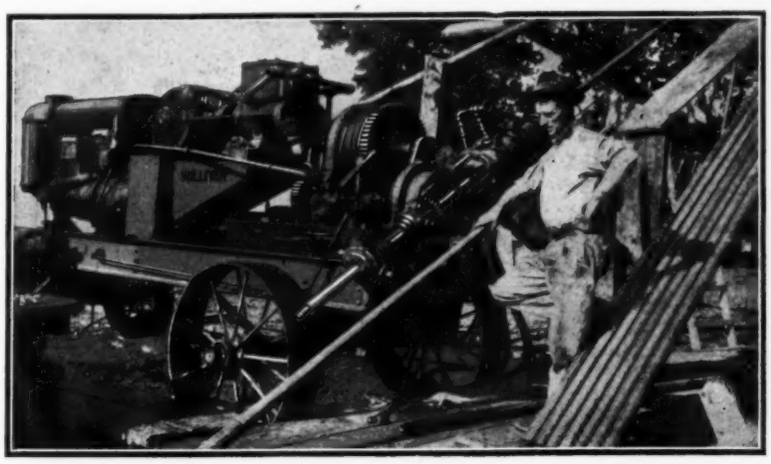
Andrews County—Amon Carter and Henry Zweifel's Cowden 1, top salt 1375 ft, dr 1520 ft. J. S. Cosden et al's Ratliff-Bedford 1, lcn. Calvin-Belt et al's Ratliff-Bedford 1, lcn. Deep Rock Oil Co.'s W. J. Harris 1, rig. Maer-Staniforth et al's Taylor-Meador 1, dr 1620 ft. C. B. McKinnon et al's J. S. Means 1, machine.

Borden County—Stivers & Guthrie's Snodgrass 1, dr 705 ft. J. L. Kennedy et al's J. S. York 1, lcn.

Coke County—Lipan Oil Co.'s S. M. Conner 1, elev 2045 ft, dr 510 ft.

Concho County—Harry Adams et al's Price 1, sp. Arkansas Fuel Oil Co.'s Hartgrove 1, bailed small amount 42 gravity oil 2454-80 and 2494-2515 ft, dr 2520 ft. Associated Pet. Co.'s Sam Waring 1, elev 2085 ft, fsh 2300 ft. Gene Mays et al's Hartgrove 1, sd 1595 ft. The Exploration Co.'s Wilson-Hartgrove 1, elev 1618 ft, ur 8¼ in 1675 ft. J. R. Lewis et al's Plants 1, lcn. Mullens-Davis et al's Martin 1, crooked hole 2210 ft.

Crane County—Geo. Church & Fields' University 2, rig; University-Duoll 1, fsh 750 ft. Geo. Church & Bert Weekly's University 2, rig. Carl Cromwell & Pickrell's University 1, elev 2561 ft, top salt 1015 ft, top lime 2740 ft, flowing 2,200 bbls oil 2890-2900 ft. Eastland Oil Co. & Collett-O'Keefe's University 2, elev 2571 ft, top salt 1100 ft, dr 2700 ft; University 4, elev 2561 ft, top salt 1041 ft, top lime 2700 ft, flowed 1125 bls 2835-67 ft; University 8, top salt 1115 ft, flowing 180 bbls per hour at 2849-48 ft; University 3, 5, 6 and 7, lcns. Gulf Prod. Co.'s Crier-McElroy 6, dr 575 ft; Crier-McElroy 4-A, dr 500 ft; J. T. McElroy 8, top salt 965 ft; dr 2275 ft; McElroy 9, top salt 1000 ft, dr 1940 ft; McElroy 1-B, elev 2585 ft, top salt 1220 ft, dr 2830 ft; University 3, elev 2599 ft, top salt 1160 ft, top lime 2893 ft, dr 2915 ft; University 4, elev 2609 ft, top salt 1160 ft, top lime 2893 ft, flowed 1075 bbls at 3012-83 ft; University 5, elev 2603 ft, top salt 1220 ft, top lime 2915 ft, dr 2925 ft; University 6, elev 2597 ft, top salt 1210 ft, top lime 2951 ft, dr 2960 ft; University 7, elev 2597 ft, top salt 1235 ft, top lime 2911 ft, dr 2920 ft; Waddell 1-A, dr 800 ft. Humble O. & R. Co.'s University 3, elev 2587 ft, top salt 1070 ft, flowing 65 bbls per hour 2930-60 ft, dr ahead; University 5, elev 2587 ft, top salt 1120 ft, dr in pay 2835 ft; University 6, elev 2565 ft, top salt 1180 ft, dr 2500 ft; University 7, elev 2589 ft, top salt 1130 ft, dr 2735 ft; University 8, elev 2580 ft, top salt 1160 ft, dr 2200 ft; University 9, sp.



ANGULAR STRUCTURE DRILLING WITH SULLIVAN DIAMOND DRILLS

When you need to drill holes at an angle to secure accurate structure drilling results, the only practical method is a Sullivan Diamond Drill.

Suppose you want to intercept fractures through which oil may be seeping up from lower formation. Suppose the formation pitches, or dips, so that vertical drilling will break up the strata as it passes from one to the next?

With the Diamond Drill it is easy, since this machine is designed to drill and take core at any angle of the 360 degrees.

Can you do this with any other machine?

The photograph shows a Sullivan "CN" 1000 ft. mounted, Buda engine powered, hydraulic feed, Diamond Drill boring a hole at 30 degrees from the horizontal not far from Tampico, Mexico. In this work, boring in soft shale, the machine is doing rapid and accurate work, covering a high percentage of core.

Sullivan Mounted Diamond Drills are built in two sizes. "CN" 1000 ft. capacity and "N" 2000 ft., both removing 2-inch core. The Class "N" heavy duty machine has a special automatic chuck permitting the use of a grief stem for fish tailing and utilizing mud fluid when necessary. Send for new Bulletin 4280-B.

Sullivan Machinery Company
409 Peoples Gas Bldg., Chicago

EVERYTHING for the OIL WELL

Big Stock of Oil Field Supplies carried in our warehouses for your convenience. Send us your orders or write today for prices and information. "We Ship Quick."

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NATIONAL Line Pipe
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AMERICAN WIRE LINES
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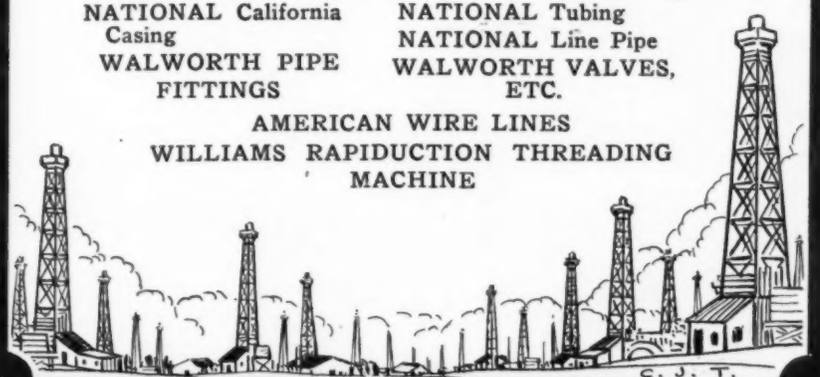

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PEDEN IRON & STEEL CO.
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Gott
Water Can
Clean-pure sparkling water ready to drink at all times. No matter where you are, the GOTT Water Can is health insurance.
Comes in 1½, 3, 5 and 10 gallon sizes. Your supply store has them.
H. P. GOTT MFG. CO.
WINFIELD, KANSAS
PURE WATEP
Gott
WATER CAN

BUY USED PIPE
and Save the Difference

4,800′	4-¾″	15 *lb.* used casing
20,000′	5-3/16″	17 *lb* used casing
15,000′	6-⅝″	24 *lb.* used casing
10,000′	8-¼″	32 *lb.* used casing
3,000′	8-¼″	28 *lb.* used casing
4,000′	10″	40 *lb.* used casing
15,000′	2″	used tubing and rods
8	25	H. P. Used Gas Engines
2	5″	Standard Rigs
8	6″	Standard Rigs
80,000′	3″	Used line pipe
50,000′	4″	Used line pipe
20,000′	6″	Used line pipe

Keystone Pipe & Supply Co.

607 HOLMES BLDG., FORT WORTH, TEXAS
Eastern Headquarters: Butler, Penna.
BRANCH STORES:
Wichita Falls, Holliday, Vernon, Breckenridge, Texas.

Casing Heads
(Louisiana Type)

This type has an inner thread into which a short piece of casing is screwed so the casing head can be lowered below the derrick floor and adjusted. When specified split glands and split ring seats are furnished.

At your supply house, or write

Alten's Foundry & Machine Works

Established 1889 Lancaster, Ohio

Independent O. & G. Co.'s University 1, elev 2555 ft ,top salt 1095 ft, dr 2775 ft; University 2, dr 1200 ft. Magnolia's University-Hardwick 2, elev 2566 ft, top salt 1065 ft, dr 2690 ft; University-Hardwick 3, 7 and 8, rigs; University-Hardwick 6, dr 740 ft; University-Lassiter 2, elev 2606 ft, top salt 1175 ft, flowed 40 bbls daily 3010-70 ft; University-Lassiter 3, rig; University-O'Keefe 7, top salt 1270 ft, dr 1660 ft; University-O'Keefe 8, lcn abn; University-O'Keefe 6, dr 1535 ft; University-O'Keefe 9, dr 545 ft. Marland & F. P. Zoch's Cowden 1, elev 2585 ft, top salt 995 ft, dr 3255 ft. McMan O. & G. Co.'s Hughes 2, testing pay after shot 2420 ft. Prairie O. & G. Co.'s University 6-A, elev 2590 ft, top salt 1140 ft, flowing 80 bbls daily, fsh bit 2965-3015 ft; University-Lassiter 1, elev 2585 ft, top salt 1210 ft, sd for storage 2775 ft. Simms Oil Co. & Atlantic Oil Prod. Co.'s University 4-A, elev 2581 ft, top salt 1110 ft, flowing 80 bbls hourly 2905-60 ft; University 5-A, elev 2582 ft, top salt 1045 ft, dr 2835 ft; University 6-A, top salt 980 ft, dr 2230 ft; University 7-A, top salt 1050 ft, dr 2145 ft; University 8-A, dk; University 1-C, elev 2583 ft, top salt 1115 ft, flowing by heads dr pay 2804-70 ft; University 2-C, fsh 520 ft; University 3-C and 4-C, lcns; University 1-D, elev 2564 ft, top salt 1010 ft, dr 2770 ft. The Texas Co.'s University 1, dr 950 ft. Tidal Oil Co. and Turman-Maxwell's University 2-F, elev 2557 ft, top salt 1035 ft, flowing 66 bbls hourly 2820-2910 ft; University 3-F, elev 2565 ft, top salt 1080 ft, dr 2850 ft; University 5-F, elev 2565 ft, top salt 1060 ft, dr 2780 ft; University 1-H, dr 685 ft; University 2-H, sr 915 ft.

Crockett County—V. T. Bolin & Co.'s P. O. Coates 1, sd 930 ft. Cumberland O. & G. Co. et al's Couch 1, fsh 3075 ft. W. W. Donnelly & J. D. Young's Pierce 1, elev 2105 ft, ur 1200 ft; Shannon 1, machine. Geo. A. Henshaw Jr. & Co.'s University 1, elev 2297 ft, top salt 450 ft, top lime 1697 ft, dr 1830 ft. J. K. Hughes Dev. Co.'s Powell 2-B, sd 2535 ft. Magnolia's Shannon 2, elev 2670 ft, top salt 925 ft, top lime 2270 ft, dr 3315 ft. Wm. Schaffer et al's University 2, rig. World Oil Co.'s Schneeman 1, elev 2632 ft, top salt 1035 ft, top lime 2280 ft, fsh junk 2575 ft. P. H. Williams et al's Powell 1, dr 565 ft. J. D. Young & Cromwell's University 1, set 5 3/16 in. 1935 ft.

Crosby County—El Capitan Oil Co.'s Slaton 1, elev 2854 ft, top salt 1270 ft, dr 3155 ft.

Culberson County—Jas. H. Gardner et al's Radford-State 1, sd 385 ft.

Jeff Davis County—Humble's C. Flores 1, dk. J. K. Hughes Dev. Co.'s Means 1, sd 1970 ft.

Ector County—J. S. Cosden et al's Connell 2-A, dr 590 ft; Connell 3-A, rig. The Exploration Co.'s J. D. Slator 1, elev 3257 ft, top salt 1575 ft, top lime 4115 ft, trace oil 4395 ft, dr 4400 ft.

Fisher County — Barbour Oil Co.'s W. A. Cross 1-A, dr 1380 ft. California Co.'s Anderson 1, ur hfw 3212 ft; Magenheimer 1, elev 2004 ft, sd 3550 ft. Hucony Gas Co.'s Langford 1, elev 2201 ft, sd with show oil 2947-50 ft, td 2962 ft. Ideal Oil Co.'s Jameson 1, rig. Marland Oil Co.'s Hodges-Rochelle 1, dr 3535 ft. Marland & Texon Oil & Land Co.'s McCall 1, materials. Fred Phillips et al's C. M. Webb 1, elev 1811 ft, sd hfw 2715 ft. R. W. Rainey et al's Marberry 2, sd hfw 2725 ft. Sinclair's J. A. Denise 1, dr 320 ft. Stearnes & Streeter's W. A. Howe 1, dr 2925 ft. F. P. Zoch & McCamey et al's Clayton 1, elev 2135 ft, dr 2685 ft; Lanius 1, dr 3495 ft.

Garza County—Emerald Oil Co.'s Boren 1, show oil 1884-1902 ft, dr 1955 ft. Pandem Oil Corp.'s Justice 1, rig.

Glasscock County—Green et al's Oxshear 1, rig. J. S. Merriwether et al's McDowell 1, lcn. R. R. Penn & Julian Pet. Corp.'s Edwards 1, dk.

Tom Green County—Marland's Llano County Fee 1, dr 825 ft. Fitzgerald & Taliaferro's Bennett 1, rig.

Hockley County—El Capitan Oil Co.'s Ellwood 1-A, dr 1005 ft.

Howard County—Bowers et al's C. Jones 1, spd and sd. Bristow & Merrick's A. J. Hooks

What Happens?

—When Your Machinery Starts and Stops

Much of the wear and tear on machinery comes from starting and stopping. For then the fluid film of lubrication is broken, ***and unless you are using the right lubricant,*** friction takes a heavy toll.

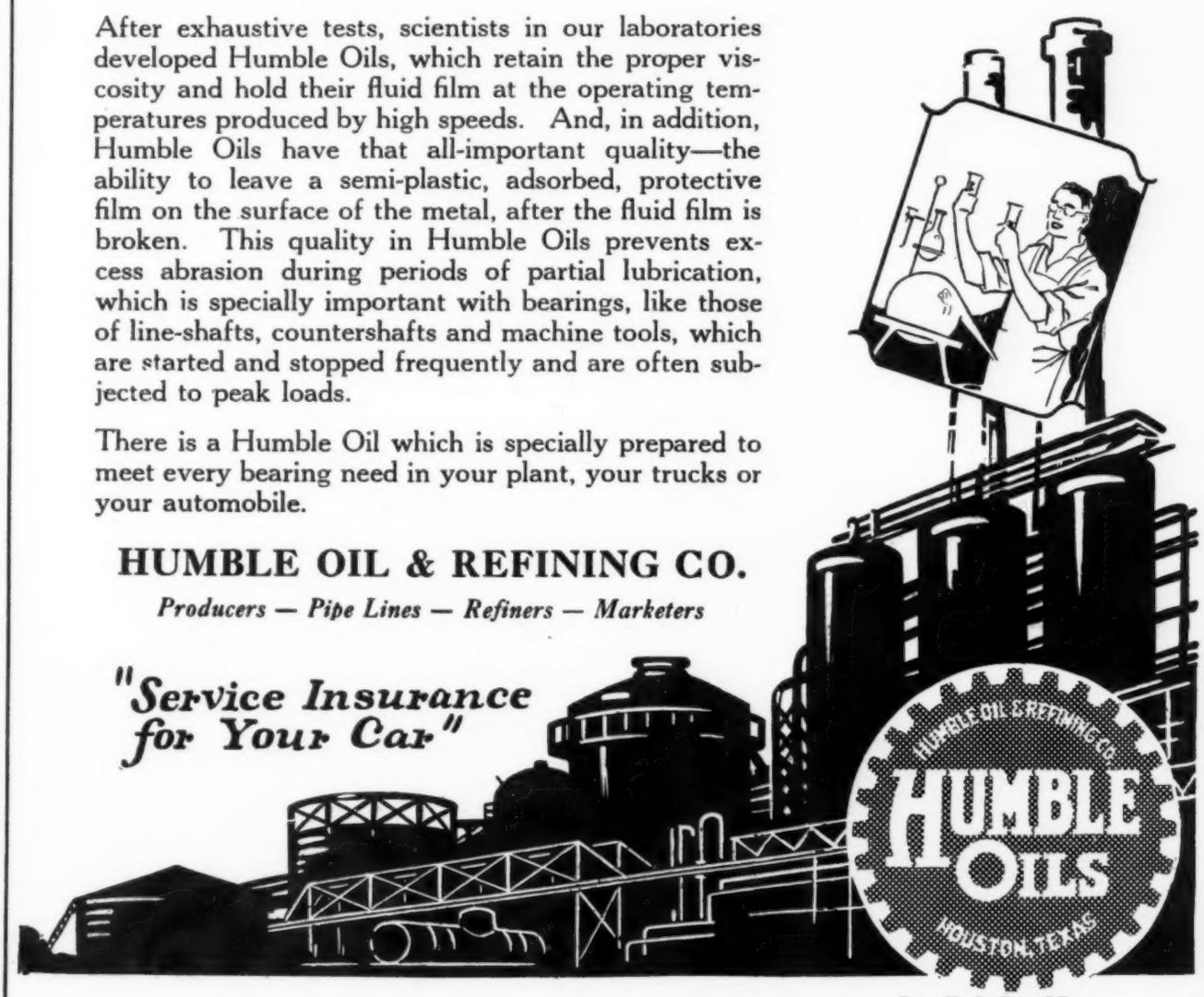
As long as the fluid film is intact, the quality of the lubricant is not so important—but when the fluid film breaks, as it does every time you start and stop a machine—the quality of the lubricant supplied to the bearings is of prime importance, if friction is to be kept from doing serious damage.

After exhaustive tests, scientists in our laboratories developed Humble Oils, which retain the proper viscosity and hold their fluid film at the operating temperatures produced by high speeds. And, in addition, Humble Oils have that all-important quality—the ability to leave a semi-plastic, adsorbed, protective film on the surface of the metal, after the fluid film is broken. This quality in Humble Oils prevents excess abrasion during periods of partial lubrication, which is specially important with bearings, like those of line-shafts, countershafts and machine tools, which are started and stopped frequently and are often subjected to peak loads.

There is a Humble Oil which is specially prepared to meet every bearing need in your plant, your trucks or your automobile.

HUMBLE OIL & REFINING CO.

Producers — Pipe Lines — Refiners — Marketers



Reg. U. S. Pat. Off.

Viking Twin Oil Pumping Units

Figure—15

FOR UNLOADING AND TRANSFER SERVICE

No. 2 Twin Outfit complete with 3 H. P. Gasoline Engine.

Capacity each pump 90 Gallons per minute.

Manufactured by

VIKING PUMP CO.

Cedar Falls, Iowa

Sold By

Southern Engine & Pump Company

HOUSTON, TEXAS

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58 PARK ROW, NEW YORK, N.Y. CABLE ADDRESS, CREDOTAN, N.Y.

2, set cas 1465 ft; Hooks 3, dr 250 ft. Fred Carey et al's Chalk 1, sd 250 ft. W. W. Donnelly & Mann's Martin 1, dr 1275 ft. Gulf Prod. Co.'s Chalk 3, rig. Godley O. & G. Co.'s A. J. Hooks 1, lcn. L. C. Harrison et al's Roberts 1, spd and sd. Humble's Douthitt 3, dr 850 ft. Lockhart & Co.'s Chalk 3, dr 1335 ft; Chalk 2-A, set cas 1352 ft; Chalk 3-A, dr 255 ft. Magnolia's Hyman-Chalk 3, lcn; Mary-Chalk 4, sd with 1200 ft oih at 1629-61 ft; Kelly-Chalk 1-A, dr 300 ft; Kelly-Chalk 2, rig; Kelly-Chalk 3, dr 590 ft; G. O. Chalk 6, machine; Owen-Chalk 8-A, swab 65 bbls oil 1581-92 ft; Sloan-Chalk 2, lcn; Sarah-Hyman 3, lcn Roberts 1, lcn; M. H. O'Daniel 1, lcn. Marland Oil Co.'s Chalk 9, lcn, abn; Chalk 10, co after shot 20 qts 1602-23 ft; Chalk 5-A, set 6⅝ in. 1628 ft; Chalk 6-A, co after shot 15 qts at 1582-90 ft; Chalk 7-A, dr oil pay 1571 ft; Chalk 8-A, dr 1320 ft; H. R. Clay 2, plugged back from 1869 to 1805 ft for shot; Clay 3, testing 700 ft oih 1783-1805 ft; Clay 4-A, set 6⅝ in 1722 ft; Clay 5-A, dr 1470 ft; Clay 1-C, sd hfw 1817 ft; Clay 1-D, elev 2676 ft, dr 1935 ft; Fisher 1, lcn; Harding 1, top salt 1146 ft, sd 2130 ft. Marland & F. P. Zoch's Guitar Ranch 1, rig; Jones 1, lcn. Mid-West Explo. Co.'s Clay 1, rig. Pure Oil Co.'s Chalk 1 and 2, rigs; A. J. Hooks 1, lcn. Tidal Oil Co.'s Chalk 1, dr 1300 ft; Chalk 2, dr 715 ft.

Hudspeth County—Lockhart & Co.'s Gardner-Moseley 1, spd and sd.

Irion County — Cashdollar-Whitemire's Abe Meyer 1, elev 2050 ft, sr 2505 ft; Bird-Roberts 1, elev 2065 ft, sd 1085 ft.

Jones County — Atlantic Oil Prod. Co. & Landreth's Howell 2, dr 2500 ft. Bateman & Campbell's Southard 1, sd 1990 ft. Gault Brown et al's Mrs. Zips 1, dr 760 ft. E. P. Campbell et al's Herndon 1, sd 1850 ft. Cole-Hart et al's Cranston 1, sd 3060 ft. Consolidated Oil Co.'s Armand-Taylor 1, dr 1785 ft. Garland & Diamond's Glynn 1, lcn. Hurley Oil Co.'s (Gibson-Johnson) John Sears 2, dr 2330 ft; Largent 1, sd 2560 ft. Gillette & Hickey et al's S. W. King 1, showing oil and water, dr 2090 ft; M. E. Young 1, sd 1200 ft. Grisham-Hunter & Wildman Pet. Corp.'s Burchfield 1, elev 1820 ft, sd 2900 ft; Williams 1, sd 2660 ft. Hutson & Weaver's Smith 1, sd 700 ft. Kirk & Brewer's Milsap 1, dr 1105 ft. Marsten Oil Co.'s Howell 1, ur cas 2315 ft; Swann 1, dr 820 ft. Mid-Continent Pet. Corp.'s H. Evans 1, sd 2360 ft. Vic H. Martin et al's Culberson 1, sd 3240 ft. Stebbins O. & G. Co's J. M. Higgs 1, dr 1530 ft. W. G. Stough et al's J. P. Wills 1, sd 730 ft. Phillips Pet. Co.'s Howell 1, lcn; Joe Winters 3, rig; Winters 4, dr 395 ft; Thornton 1, dr by bit 2836 ft; Tessie-Walling 4, dr 1430 ft; Tessie-Walling 5, lcn. Swensondale Oil Co.'s Canton 1, dr 810 ft. J. L. Tomberlin et al's Clapp 1, machine. World Oil Co.'s Clark 1, ur 2930 ft; Boyd 1, sd 2023 ft. Zeigler et al's J. W. Reeves 1, sd 1645 ft.

Kent County—Douglas Oil Co.'s Scoggins 1, dr 720 ft. Marland & Texon's Bilby 1, lcn.

King County — Gibson-Johnson's Burnett 1, dr 310 ft. Mid-West Explo. Co.'s Patton 1, spd and sd. Phillips Pet. Co.'s Burnett 1, dr 1525 ft. Sinclair's Burnett 1, spd and sd. J. L. Pattison et al's Patton 1, sd 1280 ft. White Eagle's Burnett 1, dr 1105 ft.

Loving County — Owen-Sloan's Johnson 1, sp. Kingwood Oil Co.'s Moore 1, rig.

Mitchell County—Magnolia's Mary Foster 4, dr 2800 ft; T. L. McKinney 1, dr 1510 ft; W. W. Watson 2, dr 2815 ft. Morrison-Thompson et al's Griffin 1, show oil and gas 2715-20 ft, dr 2765 ft. Paul Teas et al's Ed Strain 1, sd 1600 ft. Robert. Thraves et al's C. Way 1, rig. B. E. Walters et al's Dollen 1, sd hfw 3955 ft. Teas & Stivers' Hardee 1-A, bailed 10 bbls oil after shot 200 qts, 3065-3110 ft, td 3500 ft.

Nolan County—A. G. Malone et al's Carlyle 1, lcn; McElmurray 1, spd and sd. Herbert Oil Co.'s Pepper 1, rig. Phillips Pet. Co.'s Scott 1, dr 1145 ft. Thomas & Reynolds' Allen 1, ur 10 in. 1240 ft. Stein & Greeben's Ross 1, lcn. Walford et al's Simpson 1, lcn. John H. Winemiller Corp.'s W. L. Booth 1, sd 950 ft. Henry Zweifel & Hofmeier's Longbotham 1, sd 1310 ft.

Pecos County — Arkansas Fuel Oil Co.'s

There are more Timken Tapered Roller Bearings being used in the oil fields today than all other makes of anti-friction bearings combined.

The adaptability of Timken Bearings to oil field operations is evidenced by the fact that the leading companies have adopted Timken Tapered Roller Bearings for pumping and drilling equipment and allied accessories:

Allis-Chalmers Mfg Co
Athey Truss Wheel Co
Beaumont Iron Works
Bessemer Gas Engine Co
Buffalo Forge Co
Buffalo Gasolene Motor Co
Chicago Pneumatic Tool Co
Cole Electric Co
Cotta Transmission Corp
Dodge Manufacturing Corp
Emsco Derrick & Equipment Co
Franklin Valveless Engine Co
Hercules Motors Corp
Howell Electric Motor Co
International Derrick & Equip't Co
Jones Oil Well Reamer Co
W A Jones Foundry & Machine Co
Leidecker Tool Co
Link-Belt Meese & Gottfried Co
Lucey Manufacturing Co
Lufkin F'dry & Machine Co
McEwen Brothers
The Medart Co
Northwestern Mfg Co
Novo Engine Co
R D Nuttall Co
Oil Country Specialties Mfg Co
Oil Well Supply Co
Petroleum Engineering Corp
Portable Rotary Rig Co
J P Ratigan Co
Joseph Reid Gas Engine Co
Spang & Co
Star Drilling Machine Co
Stone Drill Corp
Titusville Iron Works Co
Trolley Supply Co
Twin Disc Clutch Co
Union Tool Co
W T Young Engine Co

TIMKEN *Tapered Roller* **BEARINGS**

Say you saw it in The OIL WEEKLY

B & A

The Safety Features are winning lasting

Satisfaction

The B. & A. Safety Rod Hook and Underslung Rod Elevator embody safety features that have made them standard with the leading producing companies.

For dependability under all conditions they are unsurpassed.

B & A Safety Rod Hook

Is absolutely safe. The weight of the elevator CLOSES and LOCKS it AUTOMATICALLY. Locked, it positively CANNOT OPEN until released by hand pressure on the handle, which is protected from opening by accident contact.

Nothing to catch in Derrick Girts. Perfectly balanced and heavy enough for the longest string of rods or light strings of tubing. Enclosed Ball Bearings.

B & A Underslung Rod Elevator

Safety latches, one above the other and acting from opposite sides entirely close opening making it impossible for rods to twist out if hook does not swivel.

Underslung and balanced, making rods hang straight, preventing kinked rods. Wearing parts dovetailed into body and easily renewed. Made in any size for any kind of rods. All wearing parts interchangeable.

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Baker Casing Shoe Co.
Bartlesville Supply Co.
Acme Fishing Tool Co.
Garrott Brass & Machine Co.
Dexter Valve
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Have you our prices and specifications, write now.

B & A Specialty Company

220 East Brady St. Tel. 3-3282
Tulsa, Oklahoma

312 Keystone Bldg. Houston, Texas

B&A Specialty Co

Manley Holmes 1, top salt 640 ft, dr 655 ft. Buell-Hagen et al's Jasper 1, lcn; Southern Life-Batchelor 1, elev 3136 ft, sd 2045 ft; University 1, elev 2816 ft, top lime 1935 ft, dr 3010 ft; McKenzie 1, dr 710 ft. Cromwell & Kimberlin's Blackman-Scharff 1, elev 2402 ft, top salt 890 ft, sd 1400 ft. T. R. Cowell's J. C. Trees 1, elev 2545 ft, top lime 2875 ft, sr 3115 ft. California Co.'s Cordova Union 1, elev 2615 ft, salt at 834-50 ft, dr sulphur water 1595 ft. John Droppleman et al's Hersheusen 1, dr 365 ft. Del Rio Synd.'s Perry 1, sd 740 ft. Garland & Mott's El Paso 1, lcn. Kershaw & Livingston's Cannon 1, lcn. Geo. A. Henshaw Jr. & Co.'s 1. G. Yates 1, lcn. Humble & Kirby Pet. Co.'s J. F. McElroy 1, rig. Mid-Kansas & Transcontinental's I. G. Yates 4-A, dr 150 ft; Yates 1-C, spd and sd; Smith-Taylor 1, sp. Texon Oil & Land Co.'s I. G. Yates 2, dr 275 ft; Yates 3, lcn. Texon & Marland Oil Co.'s Blakesley 1, sp. Quinby Oil Co.'s A. A. Gray 1, dr 365 ft; Bennett 2, fsh 1405 ft; Townsite 1, sd 3435 ft. World Oil Co.'s M. Serf 1, machine.

Presidio County—Hadlock & Miller's Tootle 1, co 2255 ft.

Reagan County—The Texas Co.'s J. D. Sugg 2, elev 2549 ft, top salt 860 ft, top lime 2110 ft, sd 260 ft. Tidal Oil Co.'s University 1, dr 555 ft.

Reeves County—Deep Rock Oil Co.'s Caldwell 1, dr 3005 ft. Humble O. & R. Co.'s T& P Fee 1, dr by tools 1610 ft. Exploration Co.'s A. A. Kinney 1, spd and sd. World Oil Co.'s Biggs-Holder 1-A, dr 315 ft.

Runnels County—Ladd-Hill & Yates' McMillan 1, dr 685 ft.

Schleicher County — Thomas Gray et al's Robinson 1, spd and sd.

Scurry County—Northwest Co.'s Stinson 1, sd 4100 ft.

Sterling County—P. H. Williams et al's Clark 1, dr 895 ft.

Stonewall County—Geo. A. Henshaw Jr. & Co.'s Brown 1, lcn. F. P. Zoch-McCamey et al's Ward 1, dr 490 ft.

Taylor County—Gibson-Johnson's J. F. Hendry 1, dr 1010 ft. Grisham-Hunter Corp.'s Huddleston 1, ur 2585 ft. Humbles' Mattie Jacobs 1, dr 790 ft. Halbert et al's Hunt 1, dr 1510 ft. Dorning & Perrine's J. A. Hammer 1, sd 250 ft. Mid-West Eplo. Co.'s Dora Smith 1, dr 1565 ft; Toombes 1, sd 1785 ft. Mitchell & Breene's Tittle 1, lcn. Morrison & Thompson's Rose 1, dr 1610 ft. Owen-Sloan et al's Latimer 1, sd 635 ft. Roesser-Pendleton's Sam Butman 1, sd 710 ft. Sanger O. & R. Co.'s Ike Brown 1, fsh 1900 ft; Gillespie 1, dr 4045 ft. World Oil Co.'s J. R. Griffin 1, spd and sd.

Upton County—Hults-Curtis et al's Giddings 1, sd 3615 ft. W. W. Donnelly & Marland's University 1, elev 2884 ft, top salt 1550 ft, set cas hfw 3040 ft. Sartain Oil Co.'s Mrs. Bull 1, sd 300 ft.

Val Verde County—Douglas Oil Co.'s Sellars 1, sd 2350 ft. Magnolia Pet. Co.'s W. E. Whitehead 1, rig. S. A. McCaskeys' Sellars 1, fsh 2525 ft. O. O. Owens et al's Mills 1, sd 960 ft. Transcontinental Oil Co.'s Stevenson 1, fsh 4412 ft. E. T. Williams et al's Holman-McNutt 1, fsh 2605 ft.

Ward County — Marland Oil Co.'s Jenniesealy 1, elev 2820 ft, top salt 1070 ft, sd for cas 2650 ft.

Winkler County—Champlin Ref. Co. et al's Cowden 1, cas trouble 940 ft. Gulf's T. G. Hendricks 2, 3 and 4, steel dks, sd by agreement. Ed. S. Hill-Ladd & Somon's Ambrugey 1, elev 2995 ft, top salt 1220 ft, sd 3447 ft. Humble's T. G. Hendricks 1, rig; Hendricks 1, Group 1, dr 200 ft. Independent O. & G. Co.'s Hendricks 1, elev 2804 ft, top lime 2720 ft, dr 2750 ft. Llano Oil Co.'s Scarborough 1, elev 2921 ft, salt at 1115-2245 ft, dr 2310 ft. McCullough & Marland's Tobe Morton 1, dr 1570 ft. RR. S. Matthews et al's Cowden 1-A, sd 200 ft. Pure Oil Co.'s Central State Bank 1, spudding. Skelly Oil Co.'s M. M. Leeman 1, elev 2951 ft, top salt 1167 ft, dr 2420 ft. Southern Crude Oil Pur. Co.'s Hendricks 1-C, elev 2801 ft, top salt 1910 ft, top lime 2597 ft, dr oil pay with 1500 ft oih 2908-15 ft; Hendricks 2-C, elev 2824 ft, top salt 1901 ft, top salt 1901 ft, cem 8¼ cas and stdz 2553 ft; Hendricks 3-C, dr 1710 ft. Southern Crude & R. A. Westbrook's Hendricks 1, dk. White Eagle O. & R. Co.'s R. A. Leck 1, materials.

The Tret-o-lite Process is Economical

Recovery cost only a few cents a barrel. Practically no power expense—no payment of royalty—minimum labor. Our nearest field representative is at your service.

Wm. S. Barnickel & Co.
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The best materials obtainable, and exacting control of processes from first to last,—that's all. But that means steel of unvarying uniformity and quality and that's what you get when you specify Diamond "H" Bit and Jar Steel.

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SAN ANTONIO DISTRICT

Bexar County—McClanahan's Sodrok 3, dr.

Caldwell County—Fred Adams et al's Walter Ellison 1, Richard sur, dr.

Duval County—Associated's Sutherland 1, dr. Barkley, Meadows, Morgans' King-Harper 3, testing. Cintex Pet. Co.'s 2, sd. Humble's Singer 11, dr; Walsh 7, dr; Schallert 5, dr; Koehler 5, dr. Humble-Reiter-Foster's sec 144, dr. Magnolia's Spear 1, dr. Geo. Marshall's 1, section 458, testing. Maurer & Dugan's Hoffman 1, dr. National Oil Co.'s Ball 1, dr.

Gonzales County—Martin Oil Co.'s Preston 1, dr. R. J. Kerchival et al's Billings 2, spd.

S. F. SHAW
Consulting Engineer
Air and Gas Lift Design
301 Terrell Road, San Antonio, Texas

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CONSULTING GEOLOGIST
ADVISOR ON GEOPHYSICAL INSTRUMENTS
619 Petroleum Bldg., Houston, Texas

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County and District
Catalog on Application
HEYDRICK MAPPING COMPANY
Wichita Falls, Texas

OIL MAPS—MID-CONTINENT FIELDS
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Township Plats Lease Forms
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WANTED: To buy producing royalties under developed or partially developed oil properties in Texas, Louisiana, Oklahoma, New Mexico or Arkansas.
Give particulars and lowest cash price in first letter.
I. S. HANDY, 1521 ESPERSON BLDG. Houston, Texas.

Kleberg County—Humble's Kleberg Trustee 3, dr; Kilvin 1, dr; Flato 1, dr. Texas Co.'s 1, dr. J. E. Walsh et al's Flato 1, dr. Witherspoon Oil Co.'s 1, dr.

Medina County—Alamo Drilling Co.'s Kenedy 1, dr. Armstrong's Lacey 1, dr. Carl Switzer's Zerr 1, dr. California Medina Co.'s Rothe 1, dr. Fennell et al's 1, sur 115, dr. Ina Oil Co.'s Sur 746, dr 1170 ft. Medina Synd. Co.'s Mitchell 2, dr. J. A. Swaye's Offinger 1, dr. Witherspoon Oil Co.'s Redus 2, set cas. F. L. Williams' Fohn 2, dr. Wheeler & Peters' Berger 1, dr 1150 ft.

Zapata County—Buffalo-Erie's F. Martinez 3, lcn. Charco Rendendo Oil Co.'s Garcia 65 and 66, dr. Hill & Associates' Villa Grant 1, dr. O. W. Killam's Lange 1, dr. Duke Langford's Charco Rendendo 1, dr; Martinez 1, dr. Howard Staggs et al's Hinnants 1, dr. Mission Oil Co.'s Slator 1, dr. Magnolia's Jennings 5, dr; Cuellar 4, dr.

COMPLETIONS

TEXAS

(Cotinued from page 78)

STEPHENS COUNTY

Company, Well and Location	Initial Production Bbls.	Depth
Texas Fidelity Oil Corp., Pratt 8 ¶1½-30		2015

SOUTH VERNON DISTRICT

Fain-McGaha-Murchison et al, Fluhman 7	75	1497
Humble, W. T. Waggoner 21-M	50	2384
Phillips, Waggoner 2-II	130	2382
Waggoner 16-NN	15	2602
Prairie, W. T. Waggoner 4-B	35	2310

THROCKMORTON COUNTY

Marland & Roeser-Pendleton, Mathews 1	*	2009
Moore et al, Matthews 1-E	*	2010
Reiter-Foster Oil Corp., Elliott 2	*	4150
Woolens et al, Rogers 1	†	450

UPTON COUNTY

Dixie Oil Co., Burleson 22	1050	2015

WHEELER COUNTY

Mid-Kansas, W. S. Curlee 2	640	2326
Upham Gas Co., R. W. Griswold 1 ¶15		1828

YOUNG COUNTY

Boller et al, Gragg 2	105	759
Reed et al, Matthews 3	30	752
Winemiller Corp., Miller 1	*	848

P. & R. Plans Tests in Big Horn Basin

Casper, Wyo.—Producers & Refiners Corporation will immediately drill a test on the Pitchfork structure, which is an anticline lying near the southern end of the Big Horn basin near Thermopolis. Much geological work was done before the location was made. The anticline is regarded as a black oil possibility. The company also plans to test other black oil structures within the basin. The drilling program includes the drilling of several wells in the Oregon Basin field, which was recently proven as oil-bearing in the deeper sands.

Leases Gas Land

Casper, Wyo.—The Lusk Royalty Company has been granted a government lease on 1000 acres of promising oil and gas land in Niobrara County. On the leases are wells capable of producing 20,000,000 cubic feet of gas daily. The company's development program has not been announced. The greater part of the gas is not being marketed.

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PITTSBURGH SEAMLESS

Larger Casing Sizes

OUR new Mannesman-Pilger Mill which went into production a few months ago carries the superior "Pittsburgh Seamless" standards into seamless steel casing in sizes up to 12½ inches in diameter. The greater strength both in the joints and in resistance to collapse of this casing means greatly increased economy and production.

Pittsburgh Seamless Steel Casing, Tubing and Drill Pipe are made by piercing solid ingots and billets of best basic open hearth steel. The severity of this process proves the soundness of every foot of the finished product, and produces tubing of exceptional texture and uniformity.

Pipe Storage Yard at Memphis

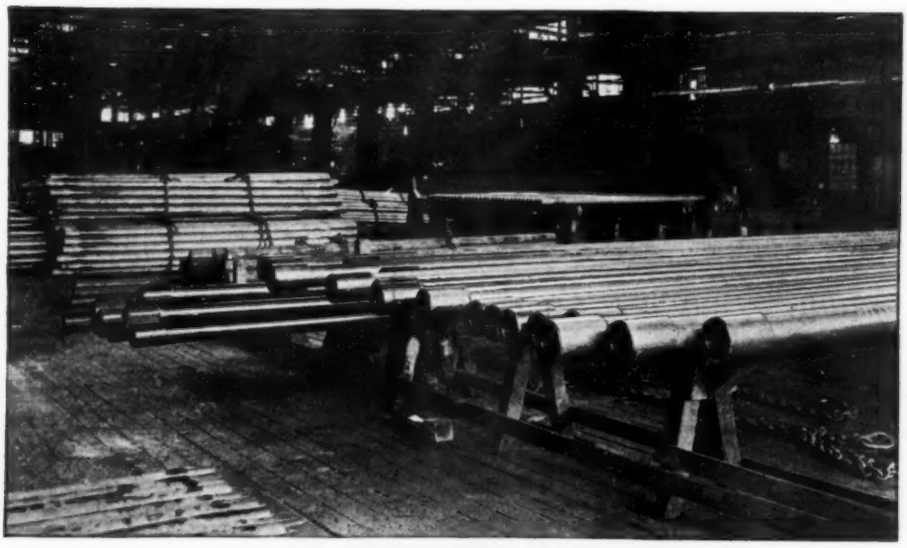
Our large pipe storage yard at Memphis and warehouse stocks at other convenient points enable us to give efficient service to the Mid-Continent, Gulf Coast and California fields. Your inquiries will be appreciated and receive prompt attention.

Pittsburgh Steel Products Co.

PITTSBURGH NEW YORK CHICAGO DETROIT

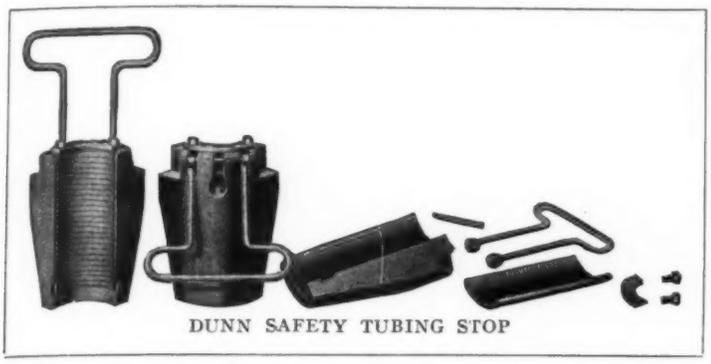
Second National Bank Bldg., Houston, Tex. Atlas Life Bldg., Tulsa, Okla.

Pacific Coast Distributors, Buck & Stoddard, Los Angeles, Calif.



ROTARY DRILL PIPE WITH COUPLINGS

NEW EQUIPMENT, CATALOGS, BULLETINS, BOOKS



DUNN SAFETY TUBING STOP

Safety Is Feature of Tubing Stop

That it prevents costly fishing jobs is the claim made for the tubing stop now being introduced to the oil industry by the Dunn Manufacturing Company, Oxnard, California. The stop, according to its manufacturers, presents exclusive features.

Maximum strength, simplicity, and dependability of operation are assured by the construction which does not use screws, pins or cotters.

The slip actuator and component parts are located above the wedging cone. The wedging cone, slip actuator and slips are rotably connected.

The four slips engage 80 per cent of the circumference of the casing, and the upper and lower slip reins and guides are said to insure vertical alignment of all parts.

The bow spring tension against the casing is permanently in service and insures instantaneous gravity differential between the action of the slips and the wedging cone. Should the tubing part, the bow springs are automatically forced outward at their lower ends by the spring actuated brake collar, checking the slip actuator and causing a quick stop of the string of tubing. Gripping teeth of the slips are slightly angular and set or release without damage. Tubing may be run as rapidly as desired without the slips setting.

More detailed and specific information regarding these slips will be supplied by the Dunn Manufacturing Company, Oxnard, California.

New Crown Block Uses Roller Bearings

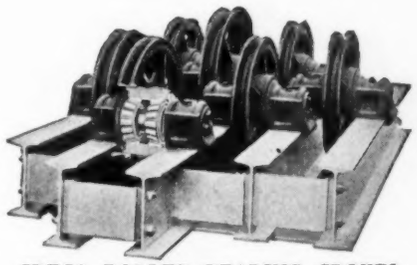
The International Derrick and Equipment Company, Columbus, Ohio, announces the addition of a roller bearing crown block to its present line of blocks.

This new design "C" roller bearing block incorporates the use of Timken tapered roller bearings and Idecalloy Manganese steel sheaves.

Unless otherwise specified, all sheaves are furnished for standard wire lines.

Timken bearings carry all loads from all directions, the tapered bearings absorbing side thrusts in addition to direct loads. Their capacity for thrust, shock, speed and radical loads comes from the nature of their construction. Both the inner and outer races are made of Chrome-Molybdenum steel, the outer race being pressed under pressure into the sheave.

Cold rolled four and one-half inch steel shafts, highly polished and ground to size to fit into a special patented adjustable bearing clamps permit a wide range of adjustments of the sheaves on the beams and also ease of assembly on the derrick top.



IDECO ROLLER BEARING CROWN BLOCK

Beams are of 40 pound, 12-inch structural I beams, conforming to the specifications of the American Society for Testing Materials, fastened together by channel separators and short bolts, all hot dip galvanized.

Large grease reservoirs are provided in the sheaves themselves and lubrication is accomplished through the use of the Zerk-Alemite system.

Additional information will be supplied by the company on request.

Low Pressure Burner Is Economical

The Webster low pressure gas burner is particularly adaptable to oil country boilers and has already been thoroughly tested out in the field and proven satisfactory. It is manufactured and sold by the Webster Engineering Company of Tulsa, of which W. W. Webster is president. He is also designer of the burner.

The Webster burner is of the box type, the box being placed under the boiler with the grates facing upward. Dirt is banked around the outside of the pan after the burner has been placed under the boiler so as to exclude all the air except through the burner proper.

These large number of X shaped openings in the grates produce a large, soft fire that is easy on the fire box and flues and allows the boiler to operate at high rating with high efficiency.

The Webster burner is made in two sizes: No. 1 with 48 jets and No. 2 with 80 jets. The No. 1 size is for the average field boiler and the No. 2 for large field boilers used in rotary work.

Further information may be obtained by communicating with the company direct.

WEBSTER LOW PRESSURE GAS BURNER

Shaffer Products Are in Big Demand

Brea, Cal. — Export, Mid-Continent and California orders for casing heads, rotary jars, high pressure fittings and flowing devices are keeping the Shaffer Tool Works busy at full capacity 24 hours a day, according to officials of the concern here.

An order now being filled for Russian fields requires 80 export cases to contain it, while freight and express shipments to Houston and Tulsa, are leaving every few days.

On the first of January, this year, the Shaffer Tool Works absorbed the plant of the Lee-Wilkinson Tool Company at Santa Fe Springs. Since then both plants have been busier than at any former time, and if present business conditions are any criterion of the future, a further expansion will be necessary, in the opinion of Frank Mason, superintendent.

W. D. Shaffer, owner of the concern, is on a business trip throughout the Mid-Continent fields, and reports favorable reception everywhere for tools and appliances designed, developed and manufactured in California.

Reading Official On An Inspection Trip

Reading, Pa.—L. E. Thomas, president of the Reading Iron Company, was in Los Angeles recently visiting the company's local sales office and making his annual inspection trip through the fields in company with A. F. McClintock, manager oil country sales.

In an interview, Mr. Thomas announced that the company's policy of distribution of pipe through the Oil Well Supply Company will be changed, effective April 18. Reading Iron Company pipe has been sold by Oil Well Supply Company for the past fifty years.

Mr. Thomas states the new policy of distribution has not yet been worked out. The statement was made, however, that the old policy of maintaining the sales and service force in the field will be continued as in the past and in fact, it is the intention of the company to increase its selling organization in all the fields very materially.

Wickwire Spencer Gets New Staff Man

O. C. Elliott, formerly with the Wilson Oil Tools Corporation in the Mid-Continent field, has become associated with Wickwire-Spencer Steel Corporation as field representative in Oklahoma and Kansas and will work in cooperation with the Murray Tool and Supply Company of Cleveland, Oklahoma and Tulsa, distributors for Wickwire-Spencer wire rope in Kansas, Oklahoma, Texas, Louisiana, Arkansas and New Mexico.

The Murray Tool and Supply Company is located at 222 East Brady Street in Tulsa where larger quarters have been obtained due to the growth of the company's business. The company maintains branches throughout the Mid-Continent field and handle a general line of oil field supplies.

J. M. Murray of Cleveland, Oklahoma, is president of the company and Claude M. Murray of Tulsa is vice-president.

LeBus Rotary Tool Names Export Agent

Electra, Texas. — The Acme Well Supply Company of New York have been named as export agents for the products of the LeBus Rotary Tool Works of Electra, manufacturers of rotary production equipment.

T. H. Brown of Wichita Falls is now selling LeBus products in the North Texas territory and the Border Foundry and Machine Company have taken the sales agency for LeBus products in the Rio Grande Valley district. This company is under the management of Ed Mimms and maintains branches at Mirando City, Benavides and Hebbronville in Southwest Texas.

The LeBus Rotary Tool Works also have issued a new catalogue illustrating their various products and parts therefor, including the LeBus Eureka tongs and the new improved LeBus cathead. A copy may be obtained by communicating with the company direct.

Western Iron & Foundry Opens Tulsa Office

Tulsa, Okla.—A sales office of the Western Iron & Foundry Company of Wichita, Kansas, has been opened at 214 Alexander building here in Tulsa. V. W. Sunburg is in charge.

The Western Iron and Foundry Company manufacture refinery and natural gasoline plant equipment as well as producing and pipe line specialties. J. Q. Warren is general manager in Wichita.

Thos. A. Northrup, president of Northrup Equipment Company, Parkersburg, West Virginia, accompanied by Frank J. Ackman, district manager with headquarters at Shreveport, Louisiana, spent several days in Houston last week, looking over the Gulf Coast territory. Mr. Northrup went directly from Houston to his home at Parkersburg. Northrup Equipment Company manufactures the well known and widely used line of "Neco" pumping equipment. This equipment is handled in Houston by the Mutual Supply Company.

British Company to Make Oil From Coal

Washington, D. C.—Commercial production of oil from coal is to be undertaken in Great Britain in an effort to determine the possibilities of the industry, according to reports just received at the Department of Commerce.

A company, registered as the L. & N. Coal Distillation (Ltd.), has been formed for the purpose. The low temperature process will obtain from a ton of coal 20 gallons of oil, 6000 cubic feet of gas and 14 to 14½ cwt. of smokeless fuel suitable for domestic or industrial use, it is claimed.

The new company has taken over the British rights of all patents and processes owned by the Sensible Heat Coal Distillation Company, pioneers in this industry. Full-size plants will be constructed for the experiment.

Canadian Gasoline Wells Making 1000 Barrels

Edmonton, Alta.—The Turner Valley field near here is producing upwards of 1000 barrele daily of gasoline from four wells, while two wells are producing 100 barrels of extremely light oil daily. The field is really classed as a gasoline field rather than an oil producer. The gas condenses upon coming from the ground. The gasoline is shipped throughout Canada for blending purposes. An unusual feature of the wells is the increase in production from time to time. As the natural gas gets richer, condensation is correspondingly greater.

Chicago Officials Inspect Midwest Properties

Casper, Wyo.—Operations of the Standard Oil Company of Indiana, through its Rocky Mountain subsidiary, the Midwest Refining Company, will be carried on in the Rocky Mountains during the present year at a normal rate, according to Colonel Robert W. Stewart, chairman of the board of directors. Practically the entire personnel of the board of directors and officials have completed their semi-annual inspection of Rocky Mountain properties. The visiting officials expressed themselves as being well pleased with the conservation program being carried out by the company in the Salt Creek field, where upward of 100,000 barrels of production is shut in in the Lakota sand.

H. B. Burlow, of Templeton, Kenly and Company, Ltd., is now on a trip through the oil fields of Venezuela, and will spend some time in the Maracaibo Basin. He will return to Chicago about May 1. Templeton, Kenly and Company, Ltd., manufacture the widely known and used Simplex Jacks, and Mr. Burlow is in South America to obtain first hand information which will aid in boosting jack sales.

B. B. Bros.
ALL STEEL HAND HOIST

Positive Internal Brake Maintains Perfect Control

"The Strongest Geared Power for Its Weight in the World"

Weight 110 lbs.

Capacity FIVE TON STRAIGHT LINE

Size 16x17x13 High

Two Speeds 4 to 1 24 to 1

POSITIVE INTERNAL BRAKE

Construction Eight Pieces Electrical Steel Without Keys or Setscrews

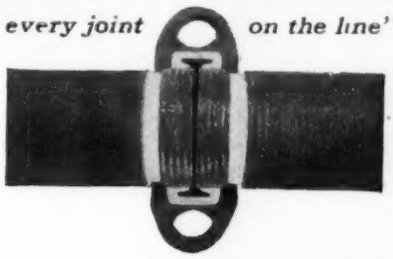
This unusual brake is one of the safety factors which make the B. B. Bros. All Steel Hand Hoist a valuable piece of equipment in the oil field. Puts a five-ton load in check with slight lever pressure, making the hoist ideal for handling heavy weights in tight places.

Steel Tail Hold Yoke or Truck Attachment. Plate can be Furnished Extra.

Sold By

The National Supply Companies

"For every joint on the line"



Permanently Leak-Tight Shock-Absorbing Joints

VICTAULIC JOINTS never need remaking.
Vibration and shifting—even earthquakes—do not make Victaulic Joints leak.
VICTAULIC JOINTS do not require pipes in exact alignment for perfect coupling.
VICTAULIC JOINTS cannot go together wrongly.
VICTAULIC JOINTS allow approximately five degrees deflection in any direction.
Every Victaulic Joint is an expansion joint.
VICTAULIC JOINTS can be put together in two minutes by unskilled, unintelligent labor.
For steel, wrought iron or cast iron pipes or for hose—there are Victaulic Joints for low, medium or high pressure—all purpose joints for every joint on the line.

For detailed information and for list of uses and users write for Victaulic Bulletin No. 2.

VICTAULIC COMPANY OF AMERICA
26 Broadway New York, N. Y.

VICTAULIC
REG. U.S. PAT. OFF.

FLEXIBLE AND LEAKTITE PIPE JOINTS
For Crude Oil, Gas, Water, Compressed Air, etc.

Drill your wells with BAROID

to prevent them from blowing wild. It forms a firm, erosion-resisting arch which seals off trouble-making gases.

Baroid is a specially processed barytes which stays in suspension indefinitely.

Stocks of Baroid are carried by:

PEDEN IRON AND STEEL CO.,
Houston, Texas
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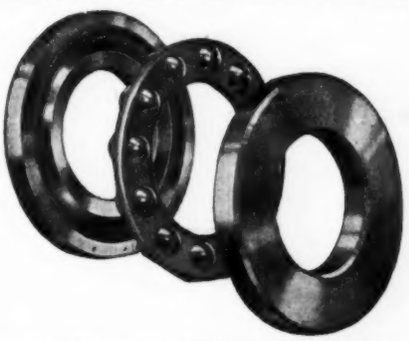
ARKMO LUMBER CO.,
El Dorado, Ark.
THOMAS E. ROBINSON,
Tulsa, Okla.

NATIONAL PIGMENT & CHEMICAL COMPANY
ST. LOUIS, MO.

AETNA
THRUST BALL BEARINGS



Engineers, Managers, and Superintendents are invited to consult our Engineering Department for advice on any bearing problem which confronts them.

Aetna Thrust Ball Bearings are used as standard equipment in many leading factories making power-driven equipment. The experience gained through years of such associations and the facilities of a highly-developed organization place us in a position to render competent advice on engineering matters.

Write for Engineer's Catalogue.

Aetna Ball Bearing Mfg. Co.
2745 High Street, Chicago, Ill.

AMERICAN
SEAMLESS STEEL
CASING

EXACTING attention to detail is highly exemplified in the thread cutting and finish in American Seamless Steel Casing. Threads are so cut as to assure perfect alignment and to facilitate screwing-up and unscrewing, even after long periods of assembly.

These are factors of mechanical finish, which, among others save time; and when Ben Franklin said, "to save time is to save money," he hit the nail on the head insofar as oil well operations are concerned.

Processes and methods, plus skill and long experience build into American Seamless Steel Casing the nth. degree in strength, long life and all-around economy.

Literature and prices upon request.

AMERICAN SEAMLESS TUBE CORPORATION

Keystone Bldg., Houston Texas.

3009 Woolworth Bldg., New York City

Petroleum Securities Bldg., Los Angeles, Calif.

SQUEAKS FROM THE BULL WHEEL

Mr. Art Houston, who writes the advertising for the Dunn Manufacturing Company, took occasion in an ad on this page last week to refer to the publisher of THE OIL WEEKLY as a "par shooter." In addition to being a good advertising writer, Art is a good golfer but it is our belief that he excels in kidding.

While out in California recently the publisher of THE OIL WEEKLY had occasion to play golf with Art twice; once in a tournament and once in just a regular game. The only thing that keeps Art from telling the real score which the publisher of THE OIL WEEKLY made is his own score on these particular games. We have sworn on a stack of Oil Weeklies that if he ever tells what we made, we will come clean and tell what he made and we feel thoroughly protected.

Obedient Boy

Boss: "Did you deliver that message to Mr. Dunn?"

Office Boy: "Nope; he wasn't in."

Boss: "Why didn't you wait for him, as I told you?"

Office Boy: "Well, the door was locked and the sign on it read: Return immediately,' so I beat it back here as quick as I could."—N. Y. Central.

A Six-Shooter Hint

"Merciful powers, man!" ejaculated a motorist who had stopped to inquire his way. "Is that revolver loaded?"

"I reckon so," replied Gap Johnson, of Rumpus Ridge. "Well, you take the righthand fork of the road there, and—"

"But you should not let the child play with the weapon. The terrible risk that he will shoot himself or—"

"Well, in case he does, I've got more cartridges around the place some'rs and thirteen more children. Do you want to find out which road to take, or don't you?"—Kansas City Star.

The Turkey Talking Parrot

On his way to town with a cartload of hens for market, Farmer Jones stopped to gossip.

"Wa-al, Jones," complained his neighbor, "the old lady's parrot you hear don't do nothin' but squawk murderous discords all day. The critter's nigh 'bout drove me insane with his infernal racket. Won't you take him to town and get rid of him?"

Jones agreed, and on the way to market heard a rumpus in the back of the cart. The rumpus continued, the parrot began to talk, and Jones turned around in his seat to see what was going on. All the hens were out in the road, walking along behind the cart. The parrot was perched on the rear of the cart, delivering to the hens the following oration:

"Now, ladies, when you have changed your minds, you may get back in the cart and ride!"

More Statistics

Dear Editor: It has been some three years or more since I favored your readers (you see my spelling has improved) with one of my pithy and to-the-point observations and I have no one to blame for this except my intense love for statistics. I have spent this inter rim in deviling into the arch hives of statistics pertaining to, bearing on, and anent the oil industry as a hole, and I might say right here that my eyes has been opened. I might temper this by saying that they have been open most of the time—one of them was closed when I dared a fellow to prove to me that the hand was quicker than the eye, which he did to my intense, compleit, and perfact satisfication.

I am offering to your readers the result of my three years' intense sojurn amongst the deadly statistics. I might add, editor, that what I am about to disclose is all backed up by figures and actual experience and I stand ready to prove all statistics given—further affiant sayeth not.

1—If all the gasoline consumed in New York City in one year was pumped into the Atlantic Ocean it would float.

2—If all the oil tankers under United States register were placed end to end alongside of the boardwalk at Atlantic City they would make large holes in the sand.

3—Statistics have proven that if twenty per cent of the total dry holes drilled in 1926 were drilled east of the Mississippi River the remaining eighty per cent were drilled west of the Mississippi.

4—If all the tank cars in use in the country were coupled together we would have nothing to move our oil in while they remained in that condition.

5—If all the derricks at present completed or under construction were made into one derrick and placed at the corner of Broadway and Forty-second Street it would probably fall through into the subway.

6—Figures show that if all the pipe lines in the country were taken up and painted, all the pipe lines in the city would be jealous.

7—If it were possible to make all steel storage tanks into one tank and place it in the Mojave Desert, I don't think anyone would do it.

8—If you read this and laugh it will show you have very little sense.—Lena Wayback, in Pure Oil News.

"Lot's wife hasn't anything on me," said convict No. 47793 as he turned to a pile of stone.

"Johnny, can you tell me where shingles were first used?"

"Yes ma'am, but I'd rather not."

POINTERS on Steel Derricks

Stability

O'Brien Steel Derricks are *strong* and *rugged*. They are scientifically designed to withstand the hardest strains. With wood, it is a difficult matter to know just what load it will stand, due to the variations in different pieces of wood. With steel, however, the various stresses and strains it will stand are definitely known and it is a very simple matter to provide the required strength. The O'Brien Steel Derrick is one upon which you can depend—whose safe loads and stresses can be accurately figured. There is no uncertainty about these important factors.

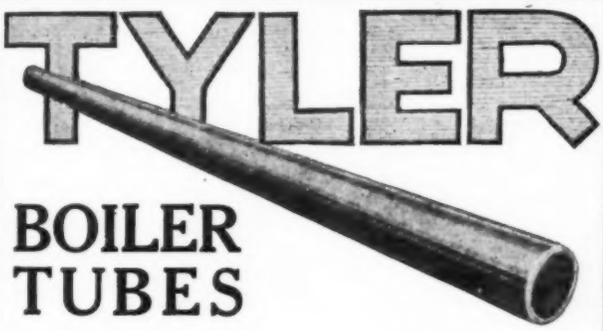
Why Experiment? O'Brien Derricks will drill your wells and pull your casing.

O'BRIEN STEEL CONSTRUCTION COMPANY, INC.

Washington, Pennsylvania

Western Representatives: RIG EQUIPMENT COMPANY, 1524 South St. Louis St., Tulsa, Okla.

TYLER



BOILER TUBES

Resist corrosion—

Whether it is charcoal iron tubes for bad water conditions or lap-welded steel tubes for good water conditions—Tyler Boiler Tubes will give *lasting* satisfaction.

All tubes are made to A.S.M.E. Code Requirements.

Request full details

THE TYLER TUBE & PIPE CO.
WASHINGTON, PA.

WAREHOUSE STOCKS

Harrisburg Pipe and Pipe Bending Co., Houston, Texas
Harrisburg Supply Company, Tulsa, Oklahoma.
Johnson-Peter Company, Brooklyn, N. Y.; Pittsburgh, Pa.
A. M. Castle & Company, Chicago; Seattle, Washington; San Francisco, Calif.; Los Angeles, Calif.
The Bourne-Fuller Company, Cleveland, Ohio.
Lukens Steel Company, New Orleans, La.

And Now—

a tool that

Pulls Standing Valves

Every Time

[even if completely buried in accumulated sand, lime, gyp, scale, mud or all of these—]

and Cleans the Working Barrel Besides!

The Nor-Bro Spiral Working Barrel Cleaner and Standing Valve Tap is Norris Brothers' latest contribution to oil production. Lowered into the hole (without turning), the spiral flanges scrape the working barrel wall clean of all foreign matter. Reaching bottom, and slowly turned, the tool digs into the accumulated matter on top of the standing valve and holds it in suspension while the tap screws into and pulls out the valve—without the wedging action that would otherwise take place.

The Nor-Bro Spiral Working Barrel Cleaner and Standing Valve Tap is made of high carbon alloy tool steel, heat treated to an exact temperature and accurately finished. It is unconditionally guaranteed. You may order direct from Robinson or through our Fort Worth branch.

NORRIS BROTHERS, Inc.
ROBINSON, ILL.
and
FORT WORTH, TEXAS

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OKLAHOMA
TEXAS
LOUISIANA

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